

## **Violence Against Women in California 1992–99**



Epidemiology and Prevention for Injury Control Branch

Gray Davis, Governor  
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## EPIC Proportions

EPIC Proportions is a series of reports on injury control produced by the Epidemiology and Prevention for Injury Control (EPIC) Branch. This report, prepared by Laura E. Lund, M.A., updates a previous EPIC Proportions: *Violent Injuries to Women in California*.

### Acknowledgements

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*Violence against Women in California, 1992-99* is funded in part by a grant from The California Endowment. The California Endowment was established in May 1996 with the mission to expand access to affordable quality health care for underserved individuals and communities and to promote fundamental improvements in the health status of all Californians.

### Feedback

Was this report useful to you? Are there other topics that you would like to see covered in similar reports? Please direct your comments and questions to:

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## Executive Summary

This report summarizes statewide and county-level data on violent injuries to women and violent assaults against women in California. It is our hope that these data will further support violence prevention efforts.

The data used in this report describe female-victim homicides, hospitalized nonfatal violent injuries to women, and women's self-reported victimization experiences. The data do not allow us to draw conclusions about victims' previous victimization history, or provide information on the roles of drugs, alcohol, and other factors potentially related to violence. Some of the key findings of this report are:

### **Intimate Partner Physical Violence (IPPV):**

- About one-third of female homicide victims were killed by their intimate partners.
- Women ages 20 and older were more likely to be killed by their intimate partners than by any other type of perpetrator.
- In 1998 and 1999, nearly six percent of California women, or about 620,000 women per year, experienced violence or physical abuse by their intimate partners.
- IPPV was most common among younger women (under age 45), black women, and women who were poor, unemployed, or lacked a college education.
- Nearly one in five women who went hungry some time in the past year because they did not have enough money to buy food was also an IPPV victim.
- Women living in households where children were present experienced IPPV at much higher rates than women living in households without children.
- In 1998 and 1999, IPPV occurred in more than 436,000 households per year in which children were also present, potentially exposing about 916,000 children to violence in the home each year.
- Pregnant women were not more likely to be IPPV victims than nonpregnant women.
- Women were more likely to experience IPPV when they did not have health insurance, did not get routine medical care, and were in poor health.

### **General Violence to Women:**

#### ***Deaths***

- During the eight-year period 1992-99, about 563 women per year were murdered.
- Women were killed with firearms more often than any other type of weapon.
- Female-victim homicides declined by 40 percent between 1992 and 1999.
- Black women were more likely to be victims of homicide than women in any other race group.

#### ***Nonfatal violent injuries***

- Between 1992 and 1999, women were hospitalized an average of 2,712 times per year for treatment of violent injuries.

- Being in an unarmed fight was the most common reason for women's violent injury hospitalizations.
- Between 1992 and 1999, hospitalized violent injuries of women declined by 42 percent.
- Black women were more likely to be victims of nonfatal violent injury than women in any other race group.

***Costs***

- Hospitals billed charges of \$44.9 million per year from 1992-99 for in-patient treatment of violent injuries to women.
- Although firearms were not the most common cause of hospitalized violent injuries among women, they were the most expensive, with billed charges averaging \$12.2 million per year.

## Introduction

Within the past decade, criminal justice and public health professionals, policy makers, community leaders, and others have recognized that violence against women is a serious criminal justice and public health problem. Women in the United States (U.S.) reported being violently victimized about 2.7 million times in 2000.<sup>1</sup> In 1994, more than 550,000 female assault victims visited U.S. emergency departments for treatment of violent injuries.<sup>2</sup> Homicide is the most serious consequence of violence, and is an important cause of injury death in women.<sup>3</sup> Although the rate of female-victim homicide declined dramatically in the 1990s, the number of homicides is still unacceptably high.<sup>1</sup> According to the Federal Bureau of Investigation (FBI), 3,800 women were murdered in 1999.<sup>4</sup>

Although women are at risk for all types of violent victimization, their risk for assault, injury, and death at the hands of an intimate partner is of special concern. Intimate partners may include current or former spouses, boyfriends, girlfriends, or same sex lovers. Intimate partners perpetrate about 21 percent of all violent crimes against women.<sup>5</sup> A recent report estimates that women in the U.S. sustain two million injuries per year as the result of violent assaults by their intimates.<sup>6</sup> In 1994, 554,700 women sought treatment for violent injuries at emergency departments; 37 percent were injured by their intimate partners.<sup>2</sup> Young women (aged 16 to 34) are at the highest risk for intimate partner violence.<sup>7-9</sup> This is of special concern to public health professionals and others, since women in this age group are the most likely to have young children in the home. The health consequences of physical and psychological violence between intimates can be significant and long lasting, both for victims and for their children.<sup>10</sup>

### This Report

In 1995, EPIC produced a report entitled *Violent Injuries to Women in California*. That report described various types of violent injuries to women, using 1991 data. In this report, *Violence Against Women in California*, we expand the scope of that report, examining statewide data for the years 1992-99. Thus, this report provides the most current information on violence against women in the state, using data reported over many years to examine changes in violence against women.

The report addresses the following questions about violence against women:

1. How many women are hospitalized or die as the result of violent injury?
2. Did the number of violent deaths and injuries to women change between 1992 and 1999?
3. What weapons are used when women are victims of assault?
4. Who are the perpetrators of violence against women?
5. How often are women victimized by their intimate partners?
6. Are some women more likely to be victims of violence than others?
7. Where do violent assaults against women usually take place?
8. How do violent assaults against women vary by county?
9. Who pays for treatment of women injured by violence?
10. What types of injuries do women sustain when they are victims of violent assault?

11. How many children in California live in households where women are victims of intimate partner violence? What ages are they likely to be?
12. Are women who have poor health, limited access to health care, and increased risk for chronic diseases more likely to be victims of intimate partner violence?

## Data and Definitions

We used several data sources in this report. The California Department of Justice (DOJ) Homicide Datafile and the California Department of Health Services (DHS) death certificate data provided information on deaths. The California Office of Statewide Health Planning and Development's (OSHPD) hospital discharge database provided information on nonfatal hospitalized violent injuries. The California Women's Health Survey (CWSH) provided data on self-reported intimate partner violence victimization. These data sources are described in detail in the Appendix.

When we refer to "women" in this report, we are referring to all females, unless otherwise specified. Ninety-three percent of the females in the injury data and 90 percent of the females in the death data are aged 13 years or older. To present the most comprehensive picture of violence and violent injuries to women, we chose to include all females rather than choose an arbitrary age cut-off. Because the proportion of children is so small, the findings presented here essentially describe the experience of adolescent and adult women in California.

Throughout the report when we refer to "injury" or "violent injury" we are referring to injury that is the result of violence (assault or abuse) by another. We did not include unintentional injuries and self-inflicted injuries in this report. Homicides are violent injuries that resulted in death. In some cases, violent injuries to women that resulted in death received treatment in the hospital first (n=502). We considered these injuries to be homicides and excluded them from the hospitalized injury counts and rates. Otherwise these cases would have been counted twice.

We used four categories to describe race/ethnicity (race): non-Hispanic white (white), Hispanic, non-Hispanic black (black), and a combined category for Asians and persons of all other races (Asian/other). Due to the small number of persons in this last category, we were not able to use finer breakdowns of race. The data presented here come from multiple sources using different definitions of race and ethnicity. Caution should be used when comparing race findings across data sources, since these sources may have handled race coding differently.

When we compared two or more numbers in this report we relied on standard mathematical methods of testing for "statistical significance." Thus, throughout the report when we state that one number is significantly higher or lower than another, we mean that we used a statistical test to determine that the numbers were too different from each other for the difference to be due to chance alone. The method we used to test for statistical significance is the comparison of 95 percent confidence intervals (CIs). CIs are the "margin of error" around a number. If the 95 percent CI of two numbers do not overlap, we can say that we are quite sure that the two numbers are different from each other. Because most tables contained far too many numbers to make all the possible comparisons within the text of this report, the tables contain the CIs for rates and other selected numbers of interest. Details on the formulas used for calculating rates and CIs can be found in the Appendix.

## Section I: Overview of Violent Injuries in California

In this section of the report we provide a general overview of fatal and nonfatal violent injuries to women in California. Where possible we have included injuries to both men and women in this section of the report. Including both sexes allows us to better understand how large the problem of violence against women is, both in absolute terms and compared to violence against men. We address the following questions in this section:

1. How many men and women are hospitalized or die as the result of violent injury?
2. Did the number of violent injuries to women and men change between 1992 and 1999?
3. What weapons are used when men and women are victims of assault?
4. Who are the perpetrators of violence against men and women?
5. How often are men and women victimized by their intimate partners?

**Magnitude of the problem of injury and homicide.** From January 1992 through December 1999, 21,693 women and 117,464 men were hospitalized for treatment of violent injuries in California (Table 1). This represents an average of 2,712 serious injuries to women and 14,683 to men each year. Put in a population perspective, there were 16.9 injury hospitalizations annually for every 100,000 women in the state, and 91.4 for every 100,000 men. Homicide took the lives of 4,419 women and 21,205 men over these eight years, an average of 552 women and 2,651 men each year. This represents 3.5 violent deaths per 100,000 women each year, and 16.5 violent deaths per 100,000 men. Therefore, compared to men, women were much less likely to be victims of violent assault. Men were victims of homicide nearly five times as often as women, and were hospitalized for injury more than five times as frequently.

**Changes over time in hospitalized injuries and homicides.** Injuries and homicides declined sharply for both men and women between 1992 and 1999 (Table 2). Injuries to men declined by 45 percent, injuries to women declined by 42 percent, male-victim homicide declined by 52 percent, and female-victim homicide declined by 40 percent.

### Weapons used in violent assaults.

*Homicides.* Firearms were used more frequently than any other weapon in homicides of both men and women (Table 2; Figures 1 and 3). Homicides by firearms, cutting/piercing (i.e., knives and similar instruments), and being struck by an object declined significantly for men over these eight years. For women, only homicides by firearms and knives declined.

*Hospitalized nonfatal violent injuries.* Firearms were used more frequently than any other weapon to inflict nonfatal violent injuries to men until 1998 and 1999. In 1998, injuries due to cutting and piercing were more common than any other type of injury, and in 1999, injuries resulting from unarmed fights (e.g., fists, feet) became the most common (Table 2; Figure 2). Being injured in an unarmed fight was the most frequent reason for hospitalized violent injury of women in all years (Table 2; Figure 4). Nonfatal injuries declined in all weapon types for both men and women, with the exception of abuse and neglect injuries, which did not change significantly.

**Table 1: Homicides and Assaultive Injuries with Rates per 100,000 by Weapon and Victim Sex, All Ages, California, 1992-99**

Weapon	Homicides				Injuries			
	8-Year Total	Average Number per Year	Average Annual Rate per 100,000	95% Confidence Interval	8-Year Total	Average Number per Year	Average Annual Rate per 100,000	95% Confidence Interval
<b>TOTAL</b>								
<b>Females</b>	<b>4,419</b>	<b>552</b>	<b>3.5</b>	<b>3.2-3.7</b>	<b>21,693</b>	<b>2,712</b>	<b>16.9</b>	<b>16.3-17.6</b>
<b>Males</b>	<b>21,205</b>	<b>2,651</b>	<b>16.5</b>	<b>15.9-17.1</b>	<b>117,464</b>	<b>14,683</b>	<b>91.4</b>	<b>90.0-93.0</b>
Firearms								
Females	2,358	295	1.8	1.6-2.1	3,786	473	3.0	2.7-3.2
Males	16,455	2,057	12.8	12.3-13.4	37,052	4,632	28.8	28.0-29.7
Cutting/Piercing Instrument (e.g., knives)								
Females	607	76	0.5	0.4-0.6	3,191	399	2.5	2.2-2.7
Males	2,281	285	1.8	1.6-2.0	28,730	3591	22.4	21.6-23.1
Unarmed Fight (e.g., feet, fists)								
Females	7	1	*	*	6,108	764	4.8	4.4-5.1
Males	98	12	*	*	23,793	2,974	18.5	17.9-19.2
Striking by Object								
Females	64	8	*	*	1,848	231	1.4	1.3-1.6
Males	229	29	0.2	0.1-0.2	13,921	1,740	10.8	10.3-11.3
Abuse and Neglect**								
Females	158	20	0.1	0.1-0.2	1,473	184	1.2	1.0-1.3
Males	234	29	0.2	0.1-0.2	1,494	187	1.2	1.0-1.3
Intimate Partner Abuse***								
Females	N/A	N/A	N/A	N/A	530	163	1.0	0.9-1.2
Males	N/A	N/A	N/A	N/A	42	13	*	*
Rape								
Females	3	<1	*	*	577	72	0.5	0.3-0.6
Males	0	0	*	*	50	6	*	*
Poisoning								
Females	27	3	*	*	153	19	*	*
Males	35	4	*	*	142	18	*	*
Fire								
Females	87	11	*	*	52	6	*	*
Males	89	11	*	*	159	20	0.1	0.1-0.2
Bombs/Explosives								
Females	1	<1	*	*	54	7	*	*
Males	6	1	*	*	292	36	0.2	0.2-0.3
Pushing from High Place								
Females	8	1	*	*	86	11	*	*
Males	8	1	*	*	114	14	*	*
Strangulation/Hanging								
Females	547	68	0.4	0.3-0.5	68	8	*	*
Males	323	40	0.3	0.2-0.3	57	7	*	*
Hot Liquids/Corrosive Substances								
Females	3	<1	*	*	74	9	*	*
Males	2	<1	*	*	142	18	*	*
Drowning/Submersion								
Females	20	2	*	*	6	1	*	*
Males	29	4	*	*	15	2	*	*
All Other Specified and Unspecified								
Females	529	66	0.4	0.3-0.5	3,687	461	2.9	2.6-3.1
Males	1,416	177	1.1	0.9-1.3	11,461	1,433	8.9	8.5-9.4

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, Vital Statistics Death Statistical Master File; California Office of Statewide Health Planning and Development, Patient Discharge Data; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

\*Rates were not calculated when "average per year" was less than 20.

\*\*This category excludes abuse and neglect by an intimate partner.

\*\*\*Available only since October 1996; average is based on 3.25 years of data. This code is not available for use on death certificates.

**Table 2: Homicides and Assaultive Injuries, by Year, Sex, and Top Five Most Commonly Used Weapons,<sup>1</sup>  
All Ages, California, 1992-99**

Weapon	8-Year Total	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change in Number of Injuries 1992-99
<b>Injuries</b>										
<b>Females TOTAL<sup>2</sup></b>	<b>21,693</b>	<b>3,436</b>	<b>3,217</b>	<b>2,965</b>	<b>2,697</b>	<b>2,506</b>	<b>2,645</b>	<b>2,241</b>	<b>1,986</b>	<b>-193**</b>
Unarmed Fight	6,108	1,043	897	880	788	704	699	582	515	-70**
Firearms	3,786	745	725	559	538	418	341	239	221	-82**
Cutting/Piercing Instrument	3,191	535	485	469	415	361	326	348	252	-37**
Abuse and Neglect <sup>3</sup>	1,473	139	139	171	134	218	262	229	181	+13
Striking by Object	1,848	288	274	268	233	210	238	177	160	-18**
<b>Males TOTAL<sup>2</sup></b>	<b>117,464</b>	<b>19,275</b>	<b>17,924</b>	<b>16,181</b>	<b>15,562</b>	<b>13,553</b>	<b>12,589</b>	<b>11,799</b>	<b>10,581</b>	<b>-1241**</b>
Firearms	37,052	6,729	6,526	5,602	5,302	4,204	3,502	2,802	2,385	-672**
Cutting/Piercing Instrument	28,730	4,798	4,520	3,983	3,736	3,187	2,990	2,936	2,580	-321**
Unarmed Fight	23,793	3,581	3,130	3,082	2,968	2,783	2,846	2,801	2,602	-112**
Striking by Object	13,921	2,065	1,891	1,787	1,917	1,729	1,586	1,565	1,381	-86**
Abuse and Neglect <sup>3</sup>	1,494	195	195	199	169	210	212	163	151	-5
<b>Homicides</b>										
<b>Females TOTAL<sup>2</sup></b>	<b>4,419</b>	<b>677</b>	<b>733</b>	<b>583</b>	<b>624</b>	<b>504</b>	<b>470</b>	<b>417</b>	<b>411</b>	<b>-46**</b>
Firearms	2,358	377	430	326	326	264	240	207	188	-33**
Cutting/Piercing Instrument	607	104	84	82	93	69	59	57	59	-6**
Strangulation/Hanging	547	63	93	66	84	61	57	60	63	-3
Abuse and Neglect <sup>3</sup>	158	26	15	24	27	26	13	7	20	-1
Fire	87	15	14	4	14	13	12	8	7	-1
<b>Males TOTAL<sup>2</sup></b>	<b>21,205</b>	<b>3,388</b>	<b>3,444</b>	<b>3,218</b>	<b>2,972</b>	<b>2,476</b>	<b>2,276</b>	<b>1,828</b>	<b>1,603</b>	<b>-284**</b>
Firearms	16,455	2,646	2,734	2,588	2,365	1,900	1,708	1,338	1,176	-243**
Cutting/Piercing Instrument	2,281	412	372	328	303	266	220	199	181	-34**
Strangulation/Hanging	323	48	43	45	36	39	47	31	34	-2
Abuse and Neglect <sup>3</sup>	234	29	25	40	36	37	41	13	13	-2
Striking by Object	229	31	47	30	31	24	25	17	24	-3*

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, Vital Statistics Death Statistical Master File; California Office of Statewide Health Planning and Development, Patient Discharge Data

\*p<.05

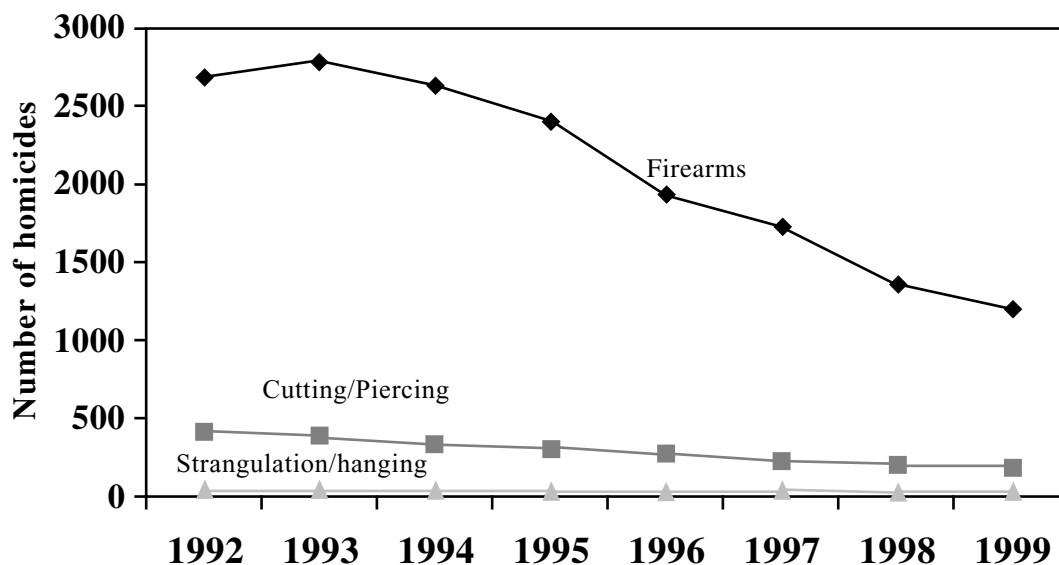
\*\*p<.01

<sup>1</sup> "Most commonly used weapons" refers to single types of weapons only (firearms, cutting/piercing, etc.). The category "All Other Specified and Unspecified" appears in Table 1 and is actually larger than some of the smaller categories presented in this table. However, because it is an aggregate category consisting of many smaller categories of quite disparate injuries, for ease of interpretation we have chosen not to include it in this table.

<sup>2</sup> "TOTAL" includes all fatal and nonfatal violent injuries, and is not a sum of the subset of injuries presented in this table.

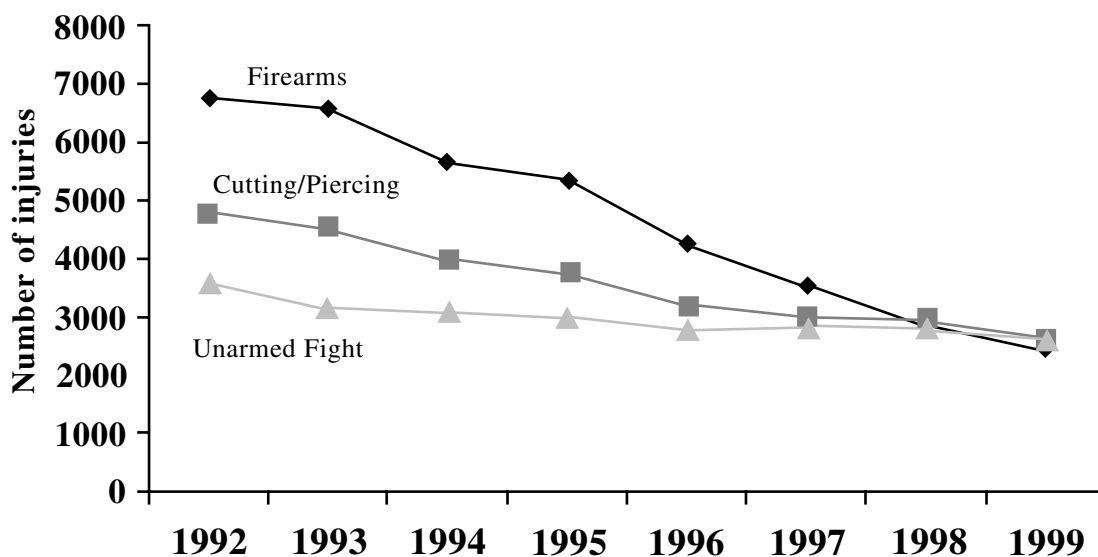
<sup>3</sup> In 1996, there were substantial changes to the definition of this category. This category does not include abuse and neglect by an intimate partner.

**Figure 1: Top Three Weapons Used in Male-Victim Homicide, All Ages, California, 1992-99**



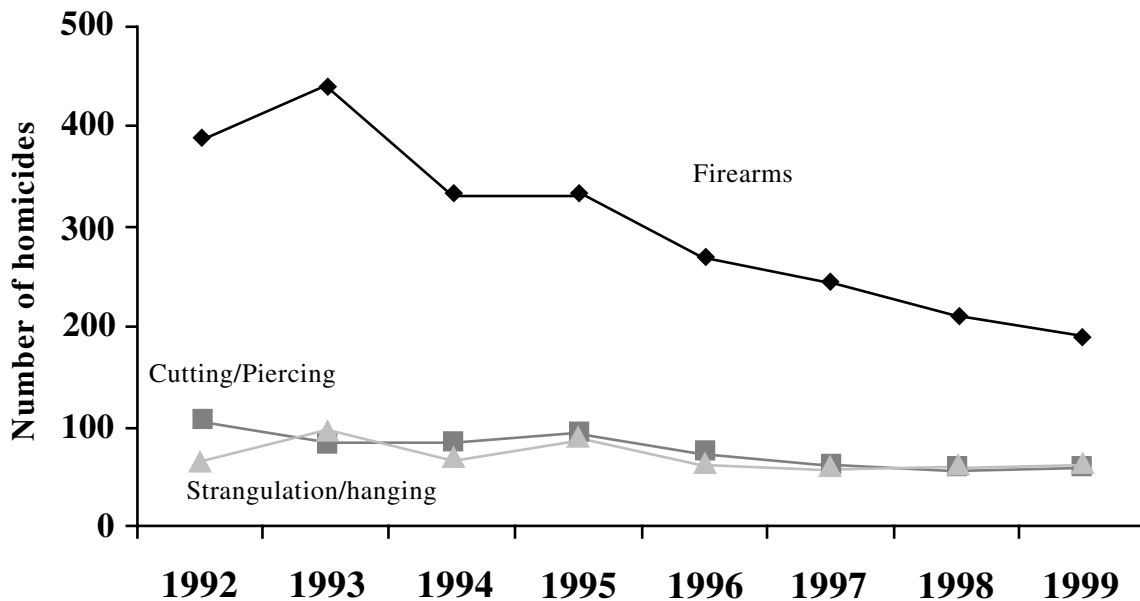
Prepared by California Department of Health Services, EPIC Branch  
Source: California Department of Health Services, Vital Statistics Death Statistical Master File

**Figure 2: Top Three Weapons Used in Violent Injuries Requiring Hospitalization for Males, All Ages, California, 1992-99**



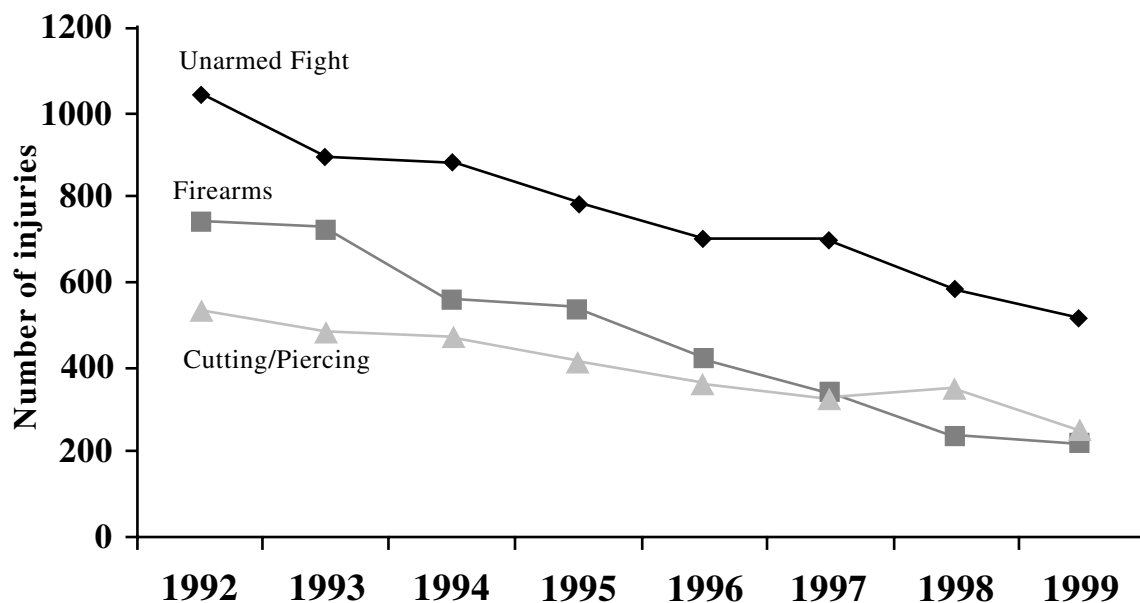
Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

**Figure 3: Top Three Weapons Used in Female-Victim Homicide, All Ages, California, 1992-99**



Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

**Figure 4: Top Three Weapons Used in Violent Injuries Requiring Hospitalization for Females, All Ages, California, 1992-99**



Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

**Injuries Inflicted by Intimate Partners.** Unfortunately, hospitalized injury data do not provide much information on intimate partner physical violence (IPPV). We often do not know which victims of violent injury were assaulted by their intimate partners.

In October 1996, a cause of injury code (E-code 967.3) became available in the hospital data to identify injuries sustained through abuse perpetrated by intimate partners. Cause of injury codes are used to identify the means used to inflict the injury that required hospitalized treatment. The “principal” cause of injury code identifies the main weapon used to inflict the injury or the most important reason for injury hospitalization. Since E-code 967.3 went into effect, hospitals used it 530 times as the principal cause of injury code for women’s violent injuries, an average of 163 per year (Table 1). This means that hospitals identified 530 women who were hospitalized for treatment of injuries that were primarily or exclusively the result of assault or abuse by an intimate partner. During this same period there were also 42 men hospitalized with intimate partner assault or abuse as the principal cause of injury, an average of 13 per year.

Cause of injury codes can be used to identify other causes that may have contributed to the injury in addition to the principal cause of injury. To find out how often intimate partner abuse was either a principal or contributing cause of injury, we looked at all instances in which hospitalized injuries received an intimate partner abuse E-code 967.3 for the years 1997-99 (Table 3). There were 826 violent injury hospitalizations for intimate partner abuse, an average of 275 per year. Women were the victims in 91 percent of these injuries.

**Table 3: Hospitalized Injuries Due to Assault by an Intimate Partner,<sup>1</sup> by Sex, All Ages, California, 1992-99**

	1997	1998	1999	Total
<b>Total</b>	<b>313</b>	<b>263</b>	<b>250</b>	<b>826</b>
Females	290	243	221	<b>754</b>
Males	23	20	29	<b>72</b>

Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

<sup>1</sup>Includes all uses of E-code 967.3, abuse perpetrated by spouse or partner, not just principal E-code.

Consistent with other types of violent injuries and homicides, hospitalized injuries inflicted by intimate partners declined from 1997 to 1999 by about 20 percent. However, a closer examination of the data for men and women show that this decline did not occur for both sexes. Intimate partner-inflicted injuries to women decreased by about 23 percent, while they did not decrease at all among men. In fact, men experienced a small increase in intimate partner inflicted injuries during this three-year period.

It is important to note here that the number of injuries attributed to intimate partner violence in the hospital discharge data probably does not include all hospitalized intimate partner injuries. There are many reasons that injuries inflicted by intimate partners may not have been coded as such.

One of the most common reasons may be failure of hospital personnel to note the identity of the perpetrator in the medical record. Coders cannot apply E-code 967.3 if the information is not in the patient's chart. Researchers have found that medical staff often do not record the identity of the assailant in the medical record.<sup>11</sup>

**Intimate Partner Homicides.** Intimate partners killed women more often than any other type of perpetrator in 1999, the most recent year for which data are available (Table 4). There were 431 female-victim homicides, with intimate partners committing 34 percent. By contrast, intimate partners were responsible for very few homicides of men, both in absolute numbers and as a proportion of all male-victim homicides. Unknown perpetrators killed men more often than any other type of perpetrator (42 percent), followed by friends, acquaintances, or other persons known to the victim (30 percent).

**Table 4: Homicides by Victim's Relationship to Perpetrator and Victim Sex, All Ages, California, 1992-99**

	Males		Females	
	Number of Homicides	Percent	Number of Homicides	Percent
<b>TOTAL</b>	<b>1,555</b>	<b>100</b>	<b>431</b>	<b>100</b>
Relationship				
Intimate Partner <sup>1</sup>	31	2	145	34
Family Member <sup>2</sup>	90	6	71	16
Friend/Acquaintance <sup>3</sup>	473	30	64	15
Stranger <sup>4</sup>	314	20	42	10
Unknown <sup>5</sup>	647	42	109	25

Prepared by: California Department of Health Services, EPIC Branch  
Source: California Department of Justice, Homicide Datafile

<sup>1</sup> Current or former spouses, common-law spouses, dating partners, or same sex lovers.

<sup>2</sup> All relatives by blood relationship or legal association, excluding intimate partners (e.g., mother, father, in-laws, aunt, grandparents, son).

<sup>3</sup> Persons known to the victim, not included elsewhere (e.g., friend, acquaintance, neighbor, gang member).

<sup>4</sup> Persons not known to the victim prior to the fatal assault.

<sup>5</sup> Perpetrator was not identified by law enforcement at the time of data submission.



## Section II: Female-Victim Homicide in California<sup>1</sup>

In Section I we gave a general overview of violent injuries to men and women in California. Now we focus on the most serious consequence of violent injury to women: homicide. We address the following questions:

1. Who are the perpetrators of female-victim homicide?
2. Are women in some race or age groups more likely than others to be victims of homicide?
3. Where do female-victim homicides usually occur?
4. What types of weapons are used in homicides of women?
5. How does female-victim homicide vary by county?
6. Did the number of female-victim homicides change between 1992 and 1999?

**Female-victim homicides.** From 1992-99, more than 4,500 women died from assaults in California, an average of 574 per year (Table 5). Victims were most likely to be white (38 percent), and young (aged 20 through 39) (47 percent).

**Perpetrators of female-victim homicides.** When women were victims of homicide, the perpetrators were more likely to be their intimate partners than to be other family members, friends, strangers, or unknown perpetrators (Table 5). Strangers were the least likely perpetrators of homicides of women; responsible for a little less than 14 percent of fatal assaults.

Although women overall were most likely to be killed by their intimate partners, we found that this was true only for white, Hispanic, and Asian/other women. Black women were most likely to be victims of an unknown perpetrator. Similarly, even though strangers were responsible for the fewest homicides of women overall, we found that family members were responsible for the fewest homicides when victims were black, Hispanic, or Asian/other.

Most females under age 13 were killed by family members who committed more than 60 percent of homicides in this age group. Young women aged 13-19 were more likely to be killed by friends and acquaintances than by anyone else (37 percent). For all women aged 20 and older, intimate partners were the most frequent homicide perpetrators.

**Homicide rates by race.** We examined homicide rates by race to learn whether women in any of the four race groups were more likely than others to be victims of homicide (Table 6). Black women had a homicide rate that was significantly higher than women in any other race group. In fact, black women's rate of 12.7 homicides per 100,000 women was five times higher than the rate for white women, 3.5 times higher than the rate for Hispanic women, and more than four times the rate for Asian/other women. The rate for Hispanic women was significantly higher than that for white women, but not higher than that for Asian/other women. White women and Asian/other women had rates that were almost the same. Due to small numbers, we were not able to calculate

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<sup>1</sup>Data used in this chapter come from the DOJ Homicide Datafile. "Homicide" includes all deaths resulting from an attack by another person. We excluded justifiable homicides and deaths attributed to negligent conduct. There may be small differences in the number of cases identified through the Homicide Datafile and the death certificate data due to differences in the way cases are coded as "homicides" in the two systems.

**Table 5: Female-Victim Homicide in California, by Race, Age, Location, Weapon, and Victim/Perpetrator Relationship, 1992-99**

	Total			Intimate Partner <sup>1</sup>			Family Member <sup>2</sup>			Friend/Acquaintance <sup>3</sup>			Stranger <sup>4</sup>			Unknown <sup>5</sup>		
	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>	8-Year Total	Annual Average <sup>6</sup>	Percent <sup>7</sup>
<b>Total</b>	<b>4,589</b>	<b>574</b>	<b>(100)</b>	<b>1,354</b>	<b>169</b>	<b>(100)</b>	<b>586</b>	<b>73</b>	<b>(100)</b>	<b>1,005</b>	<b>126</b>	<b>(100)</b>	<b>621</b>	<b>78</b>	<b>(100)</b>	<b>1,023</b>	<b>128</b>	<b>(100)</b>
Race																		
Black	1,157	145	25	229	29	17	114	14	20	307	38	31	157	20	25	350	44	34
White	1,761	220	38	605	76	45	256	32	44	372	46	37	219	27	35	309	39	30
Hispanic	1,248	156	27	390	49	29	159	20	27	257	32	26	180	22	29	262	33	26
Other	417	52	9	129	16	10	56	7	10	68	8	7	63	8	10	101	13	10
TOTAL <sup>8</sup>	4,583	573	(99)	1,353	170	(101)	585	73	(101)	1,004	124	(101)	619	77	(99)	1,022	129	(100)
Age																		
<13	478	60	11	1	0	0	307	38	52	103	13	10	37	5	6	30	4	3
13-19	498	62	11	100	12	7	31	4	5	182	23	18	80	10	13	105	13	11
20-29	1,057	132	23	389	49	29	25	3	4	260	32	26	138	17	22	245	31	25
30-39	1,067	133	24	391	49	29	33	4	6	216	27	22	137	17	22	290	36	30
40-49	653	82	14	260	32	19	51	6	9	111	14	11	81	10	13	150	19	15
50-64	369	46	8	101	13	7	59	7	10	60	8	6	67	8	11	82	10	8
65 and older	400	50	9	106	13	8	80	10	14	64	8	6	79	10	13	71	9	7
TOTAL <sup>8</sup>	4,522	565	(100)	1,348	168	(99)	586	72	(100)	996	125	(99)	619	77	(100)	973	122	(99)
Location																		
In victim's home	2,541	318	55	1034	129	76	506	63	86	487	61	48	189	24	30	325	41	32
Elsewhere	2,048	256	45	320	40	24	80	10	14	518	65	52	432	54	70	698	87	68
TOTAL <sup>8</sup>	4,589	574	(100)	1,354	169	(100)	586	73	(100)	1,005	126	(100)	621	78	(100)	1,023	128	(100)
Weapon																		
Firearm	2,352	294	51	835	104	62	160	20	27	535	67	53	389	49	63	433	54	42
Piercing/cutting	713	89	16	208	26	15	86	11	15	170	21	17	85	11	14	164	20	16
Striking by object	317	40	7	79	10	6	41	5	7	67	8	7	37	5	6	93	12	9
Feet, fists, body parts	376	47	8	67	8	5	149	19	25	95	12	9	28	4	5	37	5	4
Other	721	90	16	156	20	12	139	17	24	131	16	13	76	10	12	219	27	21
Unknown	110	14	2	9	1	1	11	1	2	7	1	1	6	1	1	77	10	8
TOTAL <sup>8</sup>	4,589	574	(100)	1,354	169	(101)	586	73	(100)	1,005	126	(100)	621	80	(101)	1,023	128	(100)

Prepared by: California Department of Health Services, EPIC Branch

Source: California Department of Justice, Homicide Datafile

<sup>1</sup> Current or former spouses, common-law spouses, dating partners, or same sex lovers.<sup>2</sup> All relatives by blood relationship or legal association, excluding intimate partners (e.g., mother, father, in-laws, aunt, grandparents, son).<sup>3</sup> Persons known to the victim, not included elsewhere (e.g., friend, acquaintance, neighbor, gang member).<sup>4</sup> Persons not known to the victim prior to the fatal assault.<sup>5</sup> Perpetrator was not identified by law enforcement at the time of data submission.<sup>6</sup> Column totals may not equal overall total because of missing values for some cases or due to rounding.<sup>7</sup> Columns may not total to 100 percent due to rounding.<sup>8</sup> Row total may not equal overall total because of missing values for some cases.

**Table 6: Average Annual Female-Victim Homicide Rates per 100,000 Women,  
by Age, Race, and Victim/Perpetrator Relationship,  
California, 1992-99**

	All Homicides		Intimate Partner <sup>1</sup>		Family Member <sup>2</sup>		Friend/Acquaintance <sup>3</sup>		Stranger <sup>4</sup>		Unknown <sup>5</sup>	
	Rate per 100,000	95 % Confidence Interval	Rate per 100,000	95 % Confidence Interval	Rate per 100,000	95 % Confidence Interval	Rate per 100,000	95 % Confidence Interval	Rate per 100,000	95 % Confidence Interval	Rate per 100,000	95 % Confidence Interval
<b>Total</b>	<b>3.6</b>	<b>3.3-3.9</b>	<b>1.0</b>	<b>0.9-1.2</b>	<b>0.5</b>	<b>0.4-0.6</b>	<b>0.8</b>	<b>0.6-0.9</b>	<b>0.5</b>	<b>0.4-0.6</b>	<b>0.8</b>	<b>0.7-0.9</b>
Age												
<13	1.8	1.3-2.3	*	*	1.2	0.8-1.5	*	*	*	*	*	*
13-19	4.4	3.3-5.5	*	*	*	*	1.6	0.9-2.3	*	*	*	*
20-29	5.9	4.9-6.9	2.2	1.6-2.8	*	*	1.5	1.0-2.0	*	*	1.4	0.9-1.9
30-39	4.8	4.0-5.6	1.8	1.3-2.3	*	*	1.0	0.6-1.3	*	*	1.3	0.9-1.7
40-49	3.6	2.8-4.4	1.4	0.9-1.9	*	*	*	*	*	*	*	*
50-64	2.3	1.7-3.0	*	*	*	*	*	*	*	*	*	*
65 and older	2.5	1.8-3.2	*	*	*	*	*	*	*	*	*	*
Race												
Black	12.7	10.6-14.7	2.5	1.6-3.4	*	*	3.4	2.3-4.4	*	*	3.8	2.7-5.0
White	2.5	2.2-2.9	0.9	0.7-1.1	0.4	0.2-0.5	0.5	0.4-0.7	0.3	0.2-0.4	0.4	0.3-0.6
Hispanic	3.6	3.0-4.1	1.1	0.8-1.4	*	*	0.7	0.5-1.0	0.5	0.3-0.7	0.7	0.5-1.0
Asian/Other	2.9	2.1-3.7	*	*	*	*	*	*	*	*	*	*

Prepared by: California Department of Health Services, EPIC Branch

Source: California Department of Justice, Homicide Datafile; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

\*Rates were not calculated when the annual average consisted of 20 or fewer cases.

<sup>1</sup> Current or former spouses, common-law spouses, dating partners, or same sex lovers.

<sup>2</sup> All relatives by blood relationship or legal association, excluding intimate partners (e.g., mother, father, in-laws, aunt, grandparents, son).

<sup>3</sup> Persons known to the victim, not included elsewhere (e.g., friend, acquaintance, neighbor, gang member).

<sup>4</sup> Persons not known to the victim prior to the fatal assault.

<sup>5</sup> Perpetrator was not identified by law enforcement at the time of data submission.

rates for all races for all perpetrator types. In all perpetrator categories for which we could compute rates by race, black women had significantly higher rates than any other race group.

**Homicide rates by age.** We calculated age-specific rates to learn whether some age groups were more likely than others to be victims of homicide (Table 6). Women aged 20-29 appeared to have the highest homicide rate; 5.9 deaths per 100,000 women. However, this rate was not significantly higher than the rates for women in the 30-39 (4.8/100,000) and 13-19 (4.4/100,000) age groups. Females under age 13 had the lowest homicide rate (1.8/100,000), significantly lower than the rates for women aged 20-49.

Due to the small number of homicides in many age groups, we can make only a few comparisons by age and perpetrator type. Although women aged 20-29 appear to have the highest rate of intimate partner homicide, their rate is not significantly higher than the rates for women aged 30-49. Similarly, we found no significant differences between age groups for homicides perpetrated by friends/acquaintances or strangers.

**Location of fatal assaults.** Women overall were slightly more likely to be fatally assaulted in their own home compared to any other location (Table 5). However, this depends on the relationship between victim and perpetrator. When intimate partners or family members killed women, the fatal assault was most likely to take place in the woman's home. The majority of homicides involving strangers, unidentified perpetrators, or friends or acquaintances of the victim occurred in other places.

**Weapon.** More women died from firearm injuries than any other type of injury, accounting for more than one half of women's violent deaths (Table 5). Perpetrators most frequently chose a firearm regardless of their relationship to the victim, although strangers (63 percent) and intimate partners (62 percent) used firearms most frequently. Firearms were chosen least frequently by other family members (27 percent).

**Homicide by county.** Because of small population sizes, most counties in California had very few homicides of women. In fact, two-thirds of the counties (66 percent, n=38), accounting for about 11 percent of the female population of the state, had fewer than five homicides per year (Table 7). There were 3.6 female-victim homicides for every 100,000 women in the state (Table 8).

Due to the small number of victims per year in most counties, we were not able to compute county homicide rates in most cases. However, Figure 5 and Table 8 provide the homicide rates for the state and for the seven counties with an annual average of 20 or more victims. Although four counties appeared to exceed the state rate, only Los Angeles County had a significantly higher rate than the rate for California overall. Only Orange County had a rate significantly lower than the state rate.

**Table 7: Female-Victim Homicides in California, by County and Victim/Perpetrator Relationship, All Ages 1992-99**

	All Homicides		Intimate Partner <sup>1</sup>		Family Member <sup>2</sup>		Friend/ Acquaintance <sup>3</sup>		Stranger <sup>4</sup>		Unknown <sup>5</sup>	
	8-Year Total	Annual Average <sup>6</sup>	8-Year Total	Annual Average <sup>6</sup>	8-Year Total	Annual Average <sup>6</sup>	8-Year Total	Annual Average <sup>6</sup>	8-Year Total	Annual Average <sup>6</sup>	8-Year Total	Annual Average <sup>6</sup>
<b>CALIFORNIA TOTAL</b>	<b>4,589</b>	<b>574</b>	<b>1,354</b>	<b>169</b>	<b>586</b>	<b>73</b>	<b>1,005</b>	<b>126</b>	<b>621</b>	<b>78</b>	<b>1,023</b>	<b>128</b>
Alameda	234	29	59	7	30	4	47	6	23	3	75	9
Alpine	0	0	0	0	0	0	0	0	0	0	0	0
Amador	2	<1	2	<1	0	0	0	0	0	0	0	0
Butte	21	3	8	1	5	1	5	1	0	0	3	<1
Calaveras	2	<1	0	0	0	0	1	<1	0	0	1	<1
Colusa	1	<1	0	0	1	<1	0	0	0	0	0	0
Contra Costa	124	16	30	4	14	2	30	4	17	2	33	4
Del Norte	2	<1	0	0	0	0	0	0	0	0	2	<1
El Dorado	10	1	8	1	0	0	0	0	0	0	2	<1
Fresno	141	18	48	6	14	2	23	3	12	2	44	6
Glenn	1	<1	0	0	1	<1	0	0	0	0	0	0
Humboldt	22	3	10	1	3	<1	4	<1	0	0	5	1
Imperial	16	2	8	1	2	<1	2	<1	1	<1	3	<1
Inyo	2	<1	2	<1	0	0	0	0	0	0	0	0
Kern	97	12	29	4	12	2	17	2	13	2	26	3
Kings	17	2	8	1	3	<1	3	<1	2	<1	1	<1
Lake	14	2	9	1	1	<1	1	<1	2	<1	1	<1
Lassen	3	<1	00	0	0	0	1	<1	0	0	2	<1
Los Angeles	1714	214	380	48	205	26	424	53	298	37	407	51
Madera	23	3	7	1	3	<1	3	<1	3	<1	7	1
Marin	14	2	3	<1	0	0	7	1	1	<1	3	<1
Mariposa	3	<1	0	0	1	<1	1	<1	1	<1	0	0
Mendocino	14	2	6	1	4	<1	3	<1	0	0	1	<1
Merced	27	4	12	2	2	<1	6	1	2	<1	5	1
Modoc	0	0	0	0	0	0	0	0	0	0	0	0
Mono	1	<1	0	0	0	0	1	<1	0	0	0	0
Monterey	49	6	19	2	5	1	9	1	4	<1	12	2
Napa	10	1	6	1	2	<1	0	0	2	<1	0	0
Nevada	9	1	5	1	1	<1	3	<10	0	0	0	0
Orange	220	28	77	10	39	5	36	4	31	4	37	5
Placer	16	2	9	1	2	<1	4	<1	0	0	1	<1
Plumas	2	<1	2	<1	0	0	0	0	0	0	0	0
Riverside	239	30	78	10	32	4	51	6	20	2	58	7
Sacramento	177	22	56	7	32	4	41	5	25	3	23	3
San Benito	5	1	1	<1	2	<1	0	0	0	0	2	<1
San Bernardino	296	37	96	12	37	5	72	9	39	5	52	6
San Diego	302	38	108	14	37	5	58	7	22	3	77	10
San Francisco	129	16	34	4	5	1	23	3	33	4	34	4
San Joaquin	94	12	32	4	8	1	15	2	21	3	18	2
San Luis Obispo	13	2	1	<1	1	<1	8	1	3	<1	0	0
San Mateo	68	8	30	4	10	2	12	2	3	<1	13	2
Santa Barbara	29	4	13	2	4	<1	6	1	3	<1	3	<1
Santa Clara	102	13	42	5	16	2	20	2	7	1	17	2
Santa Cruz	16	2	9	1	1	<1	4	<1	1	<1	1	<1
Shasta	23	3	13	2	1	<1	3	<1	3	<1	3	<1
Sierra	0	0	0	0	0	0	0	0	0	0	0	0
Siskiyou	5	1	3	<1	1	<1	1	<1	0	0	0	0
Solano	58	7	16	2	11	1	14	2	6	1	11	1
Sonoma	38	5	18	2	6	1	6	1	2	<1	6	1
Stanislaus	47	6	14	2	8	1	13	2	4	<1	8	1
Sutter	12	2	3	<1	1	<1	1	<1	2	<1	5	1
Tehama	4	<1	1	<1	0	0	3	<1	0	0	0	0
Trinity	3	<1	1	<1	0	0	1	<1	0	0	1	<1
Tulare	42	5	7	1	13	2	12	2	6	1	4	<1
Tuolumne	4	<1	1	<1	2	<1	0	0	1	<1	0	0
Ventura	46	6	25	3	3	<1	4	<1	5	1	9	1
Yolo	15	2	4	<1	5	1	2	<1	0	0	4	<1
Yuba	10	1	1	<1	1	<1	2	<1	3	<1	3	<1

Prepared by California Department of Health Services, EPIC Branch  
Source: California Department of Justice, Homicide Datafile

<sup>1</sup> Current or former spouses, common-law spouses, dating partners, or same sex lovers.

<sup>2</sup> All relatives by blood relationship or legal association, excluding intimate partners (e.g., mother, father, in-laws, aunt, grandparents, son).

<sup>3</sup> Persons known to the victim, not included elsewhere (e.g., friend, acquaintance, neighbor, gang member).

<sup>4</sup> Persons not known to the victim prior to the fatal assault.

<sup>5</sup> Perpetrator was not identified by law enforcement at the time of data submission.

<sup>6</sup> Averages have been rounded to the nearest whole number. When the nearest whole number would have been zero we used "<1" so that all zero values in the table indicate a true value of zero.

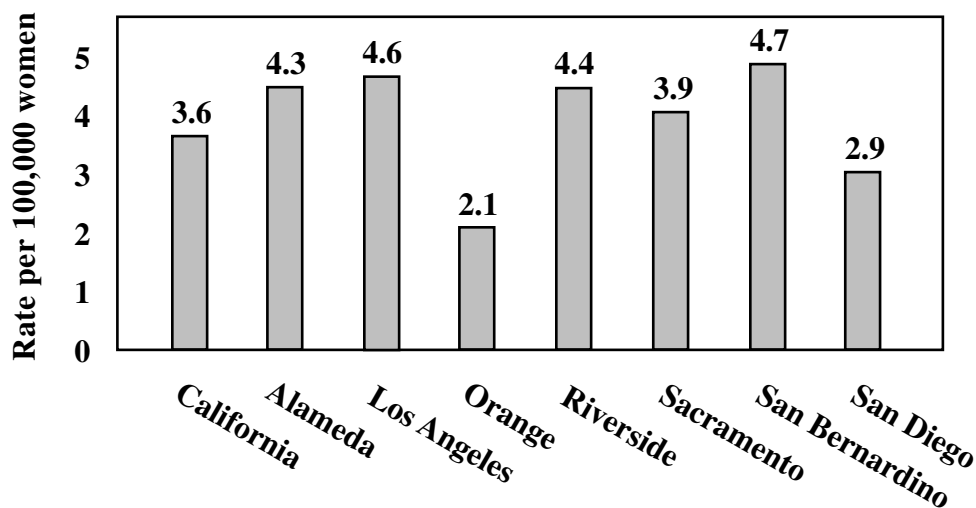
**Table 8: Average Annual Female-Victim Homicide Rates per 100,000, All Ages, California and Seven Counties<sup>1</sup> with 20 or More Female-Victim Homicides Annually, 1992-99**

	Rate per 100,000	95% Confidence Interval
<b>CALIFORNIA TOTAL</b>	<b>3.6</b>	<b>3.3-3.9</b>
Alameda	4.3	2.7-5.8
Los Angeles	4.6	4.0-5.2
Orange	2.1	1.3-2.9
Riverside	4.4	2.8-5.9
Sacramento	3.9	2.3-5.5
San Bernardino	4.7	3.2-6.2
San Diego	2.9	2.0-3.8

Prepared by California Department of Health Services, EPIC Branch  
 Source: California Department of Justice, Homicide Datafile; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> County in which fatal assault occurred.

**Figure 5: Average Annual Female-Victim Homicide Rate per 100,000, by County,<sup>1</sup> California, 1992-99**

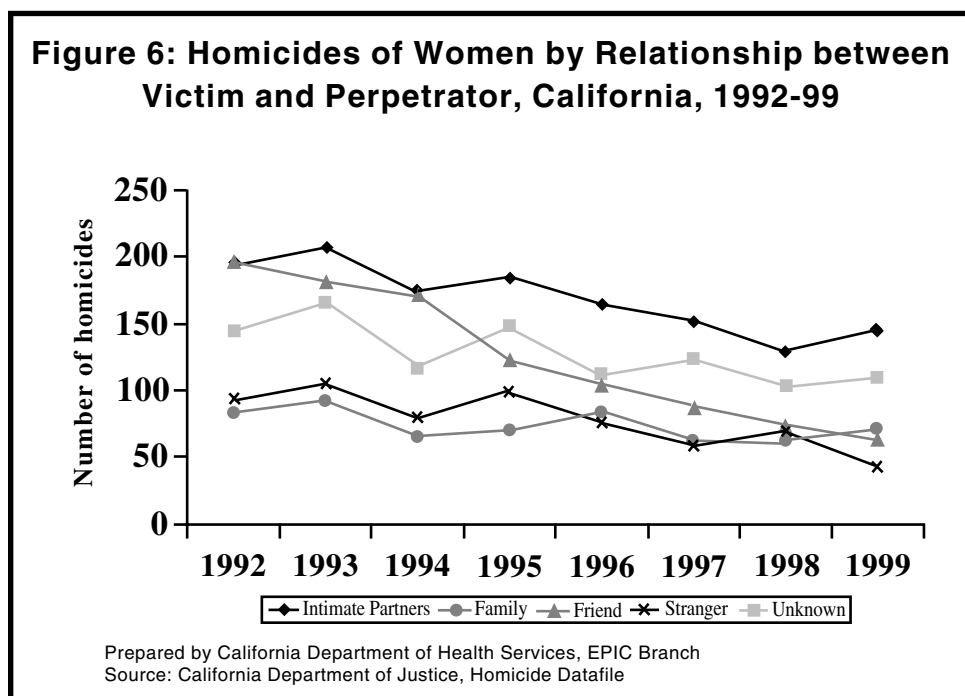


Prepared by California Department of Health Services, EPIC Branch  
 Source: California Department of Health Services, Vital Statistics Death Statistical Master File; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> County in which the fatal assault occurred; counties with an average of 20 or more homicides of women per year, on average.

**Changes in female-victim homicides in California.** As we noted in Section I of this report, homicide of women declined by about 40 percent between 1992 and 1999 (Table 2). The number of homicides decreased in all perpetrator categories (Figure 6):

<u>Perpetrator</u>	<u>Percent change 1992-99</u>
Intimate partner	-26%
Family member	-13%
Friend/acquaintance	-68%
Stranger	-54%
Unknown	-24%



#### Other changes over time (Table 9):

**Race.** Homicides declined among white, black, and Hispanic women, but did not decline for Asian/other women. White women experienced the largest decrease in homicide, about 20 deaths per year, although black women had the largest percent decline (54 percent).

**Age.** Homicides declined in all age groups except among women aged 40-49. The largest decreases occurred among women aged 20-29 (16 deaths per year) and women aged 30-39 (14 deaths per year). Women aged 20-29 experienced the largest percent decline (54 percent).

**Location.** The number of women fatally assaulted in their own homes declined by about 21 deaths per year, while those assaulted in some other place declined by 26 deaths per year. Homicides of women killed somewhere other than their own homes decreased by nearly 50 percent. These findings are consistent with the larger declines seen in friend/acquaintance and stranger violence compared to intimate partner and family violence.

**Weapon.** Homicides involving firearms, piercing/cutting, and being struck by an object declined between 1992 and 1999. Homicides by firearms saw the largest decline, nearly 50 percent, or about 32 deaths per year.

**Table 9: Female-Victim Homicides in California, by Year, Race, Age, Location, and Weapon, 1992-99**

	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change in Number of Homicides 1992-99
<b>Total</b>	<b>710</b>	<b>752</b>	<b>609</b>	<b>626</b>	<b>539</b>	<b>484</b>	<b>438</b>	<b>431</b>	<b>-47**</b>
Race									
Black	197	218	154	152	144	116	87	89	-18**
White	286	285	255	215	200	179	184	157	-20**
Hispanic	173	189	150	194	145	141	125	131	-8*
Other	54	59	47	65	50	47	41	54	-1
TOTAL <sup>1</sup>	710	751	606	626	539	483	437	431	
Age									
<13	67	68	58	61	73	55	46	50	-3*
13-19	70	87	72	76	49	46	50	48	-5**
20-29	193	193	132	144	106	101	100	88	-16**
30-39	159	188	157	155	121	107	95	85	-14**
40-49	97	95	73	78	87	83	64	76	-3
50-64	60	43	50	51	46	48	33	38	-3*
65 and older	58	68	55	52	46	37	45	39	-4**
TOTAL <sup>1</sup>	704	742	597	617	528	477	433	424	
Location									
In victim's home	379	386	338	347	302	288	244	257	-21**
Elsewhere	331	366	271	279	237	196	194	174	-26**
TOTAL <sup>1</sup>	710	752	609	626	539	484	438	431	
Weapon									
Firearm	381	421	324	316	266	239	205	200	-32**
Piercing/cutting	125	94	91	103	77	79	73	71	-6**
Striking by object	44	50	50	38	39	26	36	34	-3*
Feet, fists, body parts	51	47	59	53	53	50	28	35	-3
Other	96	128	73	108	86	73	81	76	-5
Unknown	13	12	12	8	18	17	15	15	+1
TOTAL <sup>1</sup>	710	752	609	626	539	484	438	431	

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Justice, Homicide Datafile

\*p&lt;.05

\*\*p&lt;.01

<sup>1</sup> Row total may not equal overall total because of missing values for some cases.

**County.** The number of female-victim homicides in every county in California for the years 1992-99 can be found in Table 10. Because there are so few homicides per year in most of the counties, it is not possible to draw conclusions about changes over time in most cases. However, there was a decrease in the number of homicides in six of the seven counties with 20 or more homicides per year.

**Table 10: Female-Victim Homicides in California, All Ages, by County,<sup>1</sup> 1992-99**

	8-Year Total	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change in Number of Homicides 1992-99
<b>CALIFORNIA TOTAL</b>	<b>4,589</b>	<b>710</b>	<b>752</b>	<b>609</b>	<b>626</b>	<b>539</b>	<b>484</b>	<b>438</b>	<b>431</b>	<b>-47**</b>
Alameda	234	45	28	24	40	28	26	22	21	-2
Alpine	0	0	0	0	0	0	0	0	0	*
Amador	2	0	1	0	0	0	0	0	1	*
Butte	21	7	2	1	2	3	3	1	2	*
Calaveras	2	1	0	1	0	0	0	0	0	*
Colusa	2	1	0	0	0	0	0	0	1	*
Contra Costa	124	17	17	23	15	14	13	12	13	*
Del Norte	2	1	0	1	0	0	0	0	0	*
El Dorado	10	3	0	1	2	0	2	2	0	*
Fresno	141	22	21	20	25	16	13	15	9	*
Glenn	1	0	0	0	0	0	0	1	0	*
Humboldt	22	1	5	4	3	0	5	1	3	*
Imperial	16	5	1	1	2	3	2	2	0	*
Inyo	2	0	1	0	0	0	1	0	0	*
Kern	97	10	11	22	13	11	9	11	10	*
Kings	17	2	3	1	3	3	1	3	1	*
Lake	14	3	2	1	1	0	1	3	3	*
Lassen	3	0	0	0	1	0	0	0	2	*
Los Angeles	1,714	271	312	199	238	219	163	161	151	-20**
Madera	23	3	1	6	2	2	3	5	1	*
Marin	14	5	3	0	4	2	0	0	0	*
Mariposa	3	0	0	0	0	0	0	1	2	*
Mendocino	14	1	4	1	0	1	1	3	3	*
Merced	27	2	4	6	2	2	4	4	3	*
Modoc	0	0	0	0	0	0	0	0	0	*
Mono	1	0	0	0	0	1	0	0	0	*
Monterey	49	9	9	8	4	6	7	3	3	*
Napa	10	3	2	2	2	0	0	0	1	*
Nevada	9	0	2	2	0	1	0	1	3	*
Orange	220	31	39	38	24	24	16	25	23	-2**
Placer	16	0	4	3	4	0	1	3	1	*
Plumas	2	0	1	0	0	1	0	0	0	*
Riverside	239	31	36	41	31	31	30	24	15	-2
Sacramento	177	12	37	24	15	23	27	18	21	0
San Benito	5	0	0	0	2	0	1	1	1	*
San Bernardino	296	54	56	42	44	28	25	25	22	-5**
San Diego	302	49	49	42	44	33	36	18	31	-4**
San Francisco	129	21	23	16	20	13	12	11	13	*
San Joaquin	94	2	7	9	10	13	18	11	6	*
San Luis Obispo	13	2	0	4	2	2	0	1	2	*
San Mateo	68	9	12	5	14	3	10	8	7	*
Santa Barbara	29	10	2	3	1	4	4	4	1	*
Santa Clara	10	13	18	10	11	11	14	9	16	*
Santa Cruz	16	2	2	1	4	2	2	2	1	*
Shasta	23	3	4	4	3	1	1	5	2	*
Sierra	0	0	0	0	0	0	0	0	0	*
Siskiyou	5	3	0	0	0	0	1	1	0	*
Solano	58	8	5	16	12	9	1	1	6	*
Sonoma	38	5	11	6	1	3	5	4	3	*
Stanislaus	47	11	1	2	7	7	7	4	8	*
Sutter	12	1	0	2	0	4	1	0	4	*
Tehama	4	0	0	1	1	0	0	1	1	*
Trinity	3	0	1	1	0	0	1	0	0	*
Tulare	42	5	3	4	9	6	8	2	5	*
Tuolumne	4	0	1	1	0	0	0	0	2	*
Ventura	46	5	6	7	6	6	6	6	4	*
Yolo	15	1	3	2	2	2	2	1	2	*
Yuba	10	2	2	1	0	1	1	2	1	*

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Justice, Homicide Datafile

\*Average annual change was calculated only for counties averaging 20 or more cases per year.

\*\*p<.01

### Section III: Hospitalized Violent Injuries to Women in California

In Section I we gave a general overview of both fatal and nonfatal injuries to men and women in California. In Section II we examined female-victim homicide, the most serious consequence of violence to women. Now we focus on the second most serious consequence: injuries serious enough to require hospitalized medical treatment. We address the following questions:

1. How often are women injured by intimate partners?
2. Do women in some race or age groups have higher rates of violent injury than others?
3. Who usually pays for treatment of women injured by violence?
4. How does violent injury to women vary by county?
5. Did the number of violent injuries to women change between 1992 and 1999?
6. When women were hospitalized for violent injury, what types of injuries did they have?

**Hospitalized violent injuries to women.** From 1992-99 there were nearly 22,000 hospitalizations of women for violent injury, an average of 2,712 per year (Table 11). Women hospitalized for violent injury were most likely to be white (38 percent), aged 20-39 (50 percent), and to have Medi-Cal health insurance coverage (41 percent). Women hospitalized for intimate partner abuse were also most likely to be white (51 percent) and aged 20-39 (56 percent). Women with abuse and neglect injuries were most likely to be white (48 percent), but they were much younger. About 67 percent of abuse and neglect injuries to females were to children under age 13.

**Injuries resulting from intimate partner abuse.** As we noted in Section I, the relationship between victim and perpetrator is not often available in the hospitalization data, and there is no information about abuse between intimate partners prior to October 1996. Since October 1996, when the intimate partner abuse E-code became available (E-Code 967.3), intimate partner abuse has been the main reason for injury hospitalizations 530 times. This is an average of 163 hospitalized injuries per year, or about six percent of all hospitalized violent injuries to women (Table 11).

In addition to the times intimate partner abuse was the main cause of injury, there were 88 hospitalizations per year in which women were hospitalized for other reasons, with intimate partner abuse recorded as contributing to the injury (Table 3). If we include these cases as well, about nine percent of hospitalized injuries were due to intimate partner abuse. This number is suspiciously low, and we suspect that there may be a large number of intimate partner assaults in the hospital discharge data that have not been identified as such. Intimate partners are responsible for nearly 30 percent of fatal assaults against women; we would expect a similarly large proportion to be responsible for nonfatal assaults as well.

**Injury rates by race.** We examined hospitalized injury rates by race to learn whether women in any of the four race groups were more likely than others to be victims of violent injury (Table 11). Black women had a violent injury rate that was significantly higher than women in any other race group. In fact, black women's rate of 71.8 hospitalized injuries per 100,000 women was six times higher than the rate for white women, nearly five times higher than the rate for Hispanic women, and nearly eight times higher than the rate for Asian/other women. The rate for Hispanic women was significantly higher than that of white and Asian/other women, and the rate for white women was higher than the rate for Asian/other women.

**Table 11: Violent Injury Hospitalizations in California, Females, by Race, Age, Payment Source, and Type of Abuse, 1992-99**

	All Violent Injury Hospitalizations					Abuse and Neglect <sup>1</sup>					Intimate Partner Abuse <sup>2</sup>				
	8-Year Total	Annual Average <sup>3</sup>	Percent <sup>4</sup>	Rate per 100,000	95 % Confidence Interval	8-Year Total	Annual Average <sup>3</sup>	Percent <sup>4</sup>	Rate per 100,000	95% Confidence Interval	8-Year Total	Annual Average <sup>3</sup>	Percent <sup>4</sup>	Rate per 100,000	95% Confidence Interval
<b>Total</b>	<b>21,693</b>	<b>2,712</b>	<b>(100)</b>	<b>16.9</b>	<b>16.3-17.6</b>	<b>1,473</b>	<b>184</b>	<b>(100)</b>	<b>1.2</b>	<b>1.0-1.3</b>	<b>530</b>	<b>163</b>	<b>(100)</b>	<b>1.0</b>	<b>0.9-1.2</b>
<b>Race</b>															
Black	6,560	820	30	71.8	66.9-76.7	229	29	16	2.5	1.6-3.4	94	29	18	2.5	1.6-3.5
White	8,238	1,030	38	11.9	11.1-12.6	692	86	48	1.0	0.8-1.2	267	82	51	0.9	0.7-1.2
Hispanic	5,359	670	25	15.3	14.1-16.4	436	54	30	1.2	0.9-1.6	132	41	25	0.9	0.6-1.2
Asian/Other	1,367	171	6	9.5	8.1-10.9	99	12	7	*	*	32	10	6	*	*
<b>TOTAL<sup>5</sup></b>	<b>21,524</b>	<b>2,691</b>	<b>(99)</b>			<b>1,456</b>	<b>181</b>	<b>(101)</b>			<b>525</b>	<b>162</b>	<b>(100)</b>		
<b>Age</b>															
<13	1,580	198	7	6.0	5.1-6.8	982	123	67	3.7	3.0-4.4	3	1	1	*	*
13-19	2,921	365	13	25.7	23.1-28.3	89	11	6	*	*	36	11	7	*	*
20-29	5,307	663	24	29.7	27.4-32.0	72	9	5	*	*	129	40	24	1.8	1.2-2.3
30-39	5,698	712	26	25.7	23.8-27.5	85	11	6	*	*	167	51	32	1.9	1.3-2.4
40-49	3,053	382	14	16.8	15.2-18.5	48	6	3	*	*	107	33	20	1.5	1.0-1.9
50-64	1,389	174	6	8.7	7.4-10.0	48	6	3	*	*	40	12	8	*	*
65 and older	1,745	218	8	10.9	9.5-12.3	149	19	10	*	*	48	15	9	*	*
<b>TOTAL<sup>5</sup></b>	<b>21,693</b>	<b>2,712</b>	<b>(98)</b>			<b>1,473</b>	<b>185</b>	<b>(100)</b>			<b>530</b>	<b>163</b>	<b>(100)</b>		
<b>Source of Payment</b>															
Medicare	2,111	264	10	**	**	146	18	10	**	**	68	21	13	**	**
Medi-Cal	8,841	1,105	41	**	**	779	97	53	**	**	214	66	40	**	**
Other gov't	3,345	418	15	**	**	198	25	13	**	**	58	18	11	**	**
Private Insurance	4,550	569	21	**	**	287	36	19	**	**	121	37	23	**	**
Uninsured	2,553	319	12	**	**	62	8	4	**	**	65	20	12	**	**
Other/Unknown	293	37	1	**	**	1	<1	0	**	**	4	1	1	**	**
<b>TOTAL<sup>5</sup></b>	<b>21,693</b>	<b>2,712</b>	<b>(100)</b>			<b>1,473</b>	<b>184</b>	<b>(99)</b>			<b>530</b>	<b>163</b>	<b>(100)</b>		

Prepared by: California Department of Health Services, EPIC Branch

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data; California Department of Finance, Race/Ethnic Population with Age and Sex Detail.

\*Rates were not calculated when the annual average was less than 20.

\*\*Rates were not calculated because population data are not available.

<sup>1</sup> Includes abuse and neglect as defined in E-codes 967.0 through 967.9 (excluding 967.3) and 968.4. We excluded intimate partner victimizations from October 1996 - December 1999, when E-code 967.3 became available.

<sup>2</sup> Abuse perpetrated by spouse or intimate partner, as defined in E-code 967.3. Available only from October 1996 - December 1999.

<sup>3</sup> Column totals may not equal overall total because of missing values for some cases or due to rounding.

<sup>4</sup> Columns may not total 100 percent due to rounding.

<sup>5</sup> Row totals may not equal overall total because of missing values for some cases.

We also examined hospitalized injury rates by race for the categories of abuse and neglect and intimate partner abuse. Due to small numbers it was not possible to calculate rates for Asian/other women for intimate partner abuse or for abuse and neglect. We found that black women had a rate significantly higher than white or Hispanic women for injuries from intimate partner abuse, and a higher rate than white women for other types of abuse and neglect.

**Injury rates by age.** We calculated age-specific rates to determine whether some age groups were more likely than others to be victims of violent injury (Table 11). Women aged 20-29 appeared to have the highest rate of violent injury, 29.7 injuries per 100,000 women. However, the next highest rates were for women in the 30-39 (25.7/100,000) and 13-19 (25.7/100,000) age groups, and were not significantly different from the rate for women aged 20-29. Females under age 13 had the lowest violent injury rates (6.0/100,000), significantly lower than all other age groups.

Small numbers prevented us from calculating age-specific rates for all but one abuse and neglect age category, so we cannot make comparisons. We were able to calculate intimate partner abuse rates for three age groups. No group had a rate significantly higher than any other's rate.

**Source of payment.** Hospitals charged more than 40 percent of women's injury hospitalization costs to Medi-Cal. Private insurance sources were responsible for a little over 20 percent of the costs of injury treatment. Medicare was responsible for only ten percent of hospitalization costs. We did not calculate rates for source of payment due to unavailability of population data on insurance status.

**Violent injury hospitalizations by county.** Most counties in California had very few female residents hospitalized for violent injuries (Table 12). In fact, 60 percent of California counties (n=35) had fewer than ten women hospitalized per year.

Due to the small average number of victims per year, we were not able to compute violent injury victimization rates for most counties. However, Figure 7 and Table 13 provide the overall violent injury hospitalization rate for the state and for the 17 counties with 20 or more hospitalizations per year. During this eight-year period there were 16.9 hospitalizations of women for treatment of violent injury for every 100,000 women in the state. Nine counties appeared to exceed the state rate. However, only four counties (Alameda, Los Angeles, Sacramento, and San Francisco) had a significantly higher rate than California overall.

**Changes in violent injury hospitalizations of women.** As we noted in Section I of this report, the number of hospitalizations of women for treatment of violent injuries declined by about 42 percent between 1992 and 1999 (Table 2). Violent injury hospitalizations declined in all race groups and among women aged 13-39 (Table 14). Black women had the largest decrease (92 injuries per year). Women aged 20-29 and women with Medi-Cal coverage also experienced very large decreases (85 and 86 injuries per year, respectively).

**Changes in hospitalized injuries by county.** Violent injury hospitalizations by county of residence for the years 1992-99 can be found in Table 15. Because there were so few injury hospitalizations per year in most counties, it is not possible to draw conclusions about changes

**Table 12: Violent Injury Hospitalizations in California, Females, All Ages, by County of Residence and Type of Abuse, 1992-99**

	All Violent Injury Hospitalizations		Abuse and Neglect <sup>1</sup>		Intimate Partner Abuse <sup>2</sup>	
	8-Year Total	Annual Average <sup>3</sup>	8-Year Total	Annual Average <sup>3</sup>	8-Year Total	Annual Average <sup>3</sup>
<b>CALIFORNIA TOTAL</b>	<b>21,693</b>	<b>2,712</b>	<b>1,473</b>	<b>184</b>	<b>530</b>	<b>163</b>
Alameda	1,406	176	68	8	25	8
Alpine	0	0	0	0	0	0
Amador	8	1	0	0	0	0
Butte	80	10	8	1	3	1
Calaveras	16	2	1	<1	1	<1
Colusa	3	<1	0	0	0	0
Contra Costa	664	83	38	5	11	3
Del Norte	3	<1	0	0	0	0
El Dorado	35	4	5	1	3	1
Fresno	500	62	30	4	18	6
Glenn	17	2	2	<1	1	<1
Humboldt	51	6	3	<1	2	1
Imperial	68	8	5	1	2	1
Inyo	7	1	0	0	0	0
Kern	409	51	44	6	10	3
Kings	43	5	1	<1	1	<1
Lake	34	4	3	<1	1	<1
Lassen	4	<1	0	0	1	<1
Los Angeles	8,035	1,004	334	42	122	38
Madera	44	6	5	1	0	0
Marin	68	8	10	1	8	2
Mariposa	2	<1	0	0	0	0
Mendocino	41	5	5	1	1	<1
Merced	70	9	6	1	3	1
Modoc	5	1	0	0	0	0
Mono	1	<1	0	0	0	0
Monterey	125	16	12	2	1	<1
Napa	34	4	2	<1	2	1
Nevada	24	3	1	<1	0	0
Orange	887	111	94	12	28	9
Placer	55	7	5	1	0	0
Plumas	8	1	0	0	1	<1
Riverside	978	122	234	29	22	7
Sacramento	1,489	186	68	8	48	15
San Benito	6	1	0	0	0	0
San Bernardino	1,131	141	104	13	33	10
San Diego	1,799	225	130	16	68	21
San Francisco	999	125	34	4	21	6
San Joaquin	404	50	26	3	8	2
San Luis Obispo	71	9	5	1	4	1
San Mateo	254	32	26	3	3	1
Santa Barbara	107	13	12	2	1	<1
Santa Clara	471	59	36	4	20	6
Santa Cruz	70	9	5	1	3	1
Shasta	78	10	11	1	5	2
Sierra	1	<1	0	0	0	0
Siskiyou	13	2	2	<1	0	0
Solano	194	24	10	1	7	2
Sonoma	147	18	11	1	2	1
Stanislaus	238	30	23	3	8	2
Sutter	24	3	2	<1	1	<1
Tehama	17	2	2	<1	2	1
Trinity	15	2	0	0	2	1
Tulare	118	15	11	1	7	2
Tuolumne	19	2	2	<1	1	<1
Ventura	209	26	29	4	12	4
Yolo	57	7	5	1	3	1
Yuba	37	5	2	<1	4	1

Prepared by California Department of Health Services, EPIC Branch

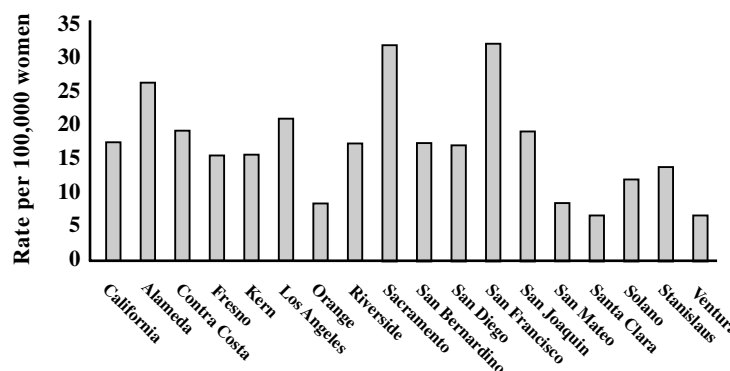
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

<sup>1</sup> Includes abuse and neglect as defined in E-codes 967.0-967.9 (excluding 967.3) and 968.4. We excluded intimate partner victimizations from October 1996 - December 1999, when E-code 967.3 became available.

<sup>2</sup> Abuse perpetrated by spouse or intimate partner, as defined in E-code 967.3. Available only from October 1996 - December 1999.

<sup>3</sup> Averages have been rounded to the nearest whole number. When the nearest whole number would have been zero we used "<1" so that all zero values in the table indicate a true value of zero.

**Figure 7: Average Annual Violent Injury Hospitalization Rate per 100,000, by County,<sup>1</sup> All Ages California, 1992-99**



<sup>1</sup>County of residence; counties with an average of 20 or more violent injury hospitalizations of women per year, on average.

Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

**Table 13: Average Annual Violent Injury Hospitalization Rates per 100,000 Women, All Ages, by Type of Abuse, California and 17 Counties<sup>1</sup> with 20 or More Violent Injury Hospitalizations Per Year, 1992-99**

	All Violent Injury Hospitalizations		Abuse and Neglect <sup>2</sup>		Intimate Partner Abuse <sup>3</sup>	
	Rate per 100,000	95% Confidence Interval	Rate per 100,000	95% Confidence Interval	Rate per 100,000	95% Confidence Interval
<b>CALIFORNIA TOTAL</b>	<b>16.9</b>	<b>16.3-17.6</b>	<b>1.2</b>	<b>1.0-1.3</b>	<b>1.0</b>	<b>0.9-1.2</b>
Alameda	25.8	22.0-29.6	*	*	*	*
Contra Costa	18.8	14.7-22.8	*	*	*	*
Fresno	16.5	12.4-20.5	*	*	*	*
Kern	16.8	12.2-21.5	*	*	*	*
Los Angeles	21.4	20.1-22.8	0.9	0.6-1.2	0.8	0.5-1.1
Orange	8.6	7.0-10.2	*	*	*	*
Riverside	17.8	14.7-21.0	4.3	2.7-5.8	*	*
Sacramento	32.7	28.0-37.4	*	*	*	*
San Bernardino	17.9	15.0-20.9	*	*	*	*
San Diego	17.2	15.0-19.5	*	*	1.6	0.9-2.3
San Francisco	33.0	27.2-38.8	*	*	*	*
San Joaquin	19.5	14.1-24.8	*	*	*	*
San Mateo	9.1	5.9-12.3	*	*	*	*
Santa Clara	7.5	5.6-9.4	*	*	*	*
Solano	13.4	8.1-18.7	*	*	*	*
Stanislaus	14.2	9.1-19.3	*	*	*	*
Ventura	7.4	4.6-10.2	*	*	*	*

Prepared by California Department of Health Services, EPIC Branch

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

\*Rates were not calculated when the average annual number of cases was less than 20.

<sup>1</sup> County of residence.

<sup>2</sup> Includes abuse and neglect as defined in E-codes 967.0-967.9 (excluding 967.3) and 968.4. We excluded intimate partner victimizations from October 1996 - December 1999, when E-code 967.3 became available.

<sup>3</sup> Abuse perpetrated by spouse or intimate partner, as defined in E-code 967.3. Data available only from October 1996 - December 1999.

**Table 14: Violent Injury Hospitalization in California, Females, by Year, Race, Age, and Source of Payment, 1992-99**

	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change in Number of Injuries 1992-99
<b>TOTAL</b>	<b>3,436</b>	<b>3,217</b>	<b>2,965</b>	<b>2,697</b>	<b>2,506</b>	<b>2,645</b>	<b>2,241</b>	<b>1,986</b>	<b>-192*</b>
<b>Race</b>									
Black	1,169	1,097	953	778	693	747	614	509	-92*
White	1,196	1,160	1,086	1,036	984	1,062	916	798	-49*
Hispanic	861	765	716	683	642	650	536	506	-46*
Other	189	177	190	171	166	150	157	158	-5*
<b>TOTAL<sup>1</sup></b>	<b>3,415</b>	<b>3,199</b>	<b>2,945</b>	<b>2,668</b>	<b>2,485</b>	<b>2,618</b>	<b>2,223</b>	<b>1,971</b>	
<b>Age</b>									
<13	191	195	240	191	190	203	185	185	-2
13-19	478	458	388	378	369	320	283	247	-32*
20-29	1,017	874	770	658	566	575	449	398	-85*
30-39	974	920	793	684	631	673	564	459	-69*
40-49	362	393	382	389	356	435	402	334	0
50-64	181	170	167	174	181	194	157	165	-1
65 and older	233	207	225	223	213	245	201	198	-3
<b>TOTAL<sup>1</sup></b>	<b>3,436</b>	<b>3,217</b>	<b>2,965</b>	<b>2,697</b>	<b>2,506</b>	<b>2,645</b>	<b>2,241</b>	<b>1,986</b>	
<b>Source of Payment</b>									
Medicare	258	262	256	277	254	308	253	243	-0
Medi-Cal	1,375	1,338	1,241	1,122	1,060	1,076	890	739	-86*
Other gov't	586	526	478	421	327	415	317	275	-42*
Private Insurance	711	660	626	568	521	519	498	447	-36*
Uninsured	461	386	331	294	312	303	259	207	-30*
Other/Unknown	45	45	33	15	32	24	24	75	+1
<b>TOTAL<sup>1</sup></b>	<b>3,436</b>	<b>3,217</b>	<b>2,965</b>	<b>2,697</b>	<b>2,506</b>	<b>2,645</b>	<b>2,241</b>	<b>1,986</b>	

Prepared by California Department of Health Services, EPIC Branch

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

\*p<.01

<sup>1</sup> Row totals may not equal overall total due to missing values for some cases.

over time in most cases. However, we did find a decrease in the number of violent injuries in 11 of the 17 counties with 20 or more injury hospitalizations per year. No county had a significant increase.

**Principal diagnosis.** Hospitalization data report both the weapon used (e.g., firearms, struck by an object) and the diagnosis, or nature of the problem for which the individual was hospitalized (e.g., open wound, skull fracture, blood loss). As we reported in Section I, the most common reason for violent injury in women was being in an unarmed fight (e.g., injuries by feet and fists), followed by assault with a firearm. The most common diagnosis treated during hospitalization was damage to the head, face, or neck (27.5 percent) (Table 16). The second most common diagnosis involved the central body, including the chest, trunk, abdomen, or back. Damage to the head and central body accounted for more than half of all diagnoses associated with violent injury to women.

**Costs of violent injury.** Two measures are available in the hospital data that shed light on the personal and societal costs of violent injury to women: length of stay in the hospital and the charges billed for treatment. Table 17 displays the average number of days spent in the hospital, the average billed charges per hospital stay, and the total annual injury cost per year, by type of weapon used.

*Length of stay.* Hospital stays for women treated for violent injury averaged slightly more than five days. Injuries due to bombs or explosives had the longest hospital stays, about 15 days, while the shortest stays were those due to drowning/submersion, at 3.4 days. Considering only the five most common reasons for injury hospitalization (unarmed fight, firearms, cutting/piercing, striking by object, abuse, and neglect), hospitalizations for abuse and neglect were the longest, an average of 8.4 days. Women with cutting/piercing injuries had the shortest stays, 3.8 days.

*Cost of hospital stay.* The charges for each injury hospitalization averaged \$17,400. Although infrequent, injury hospitalizations due to fire-related violent injuries were the most expensive, averaging \$54,800 per stay, while drowning/submersion was the least costly, about \$6,700 per stay.

*Total cost per year.* Nearly \$45 million in hospital charges were billed each year for treatment of hospitalized violent injuries to women. More than one-fourth of all charges, about 28 percent, were due to firearm injuries. At an average of \$12.2 million per year, the charges for injuries from firearms were much higher than for any other type of weapon. Unarmed fights accounted for the second largest total cost per year, \$8.9 million.

**Table 15: Violent Injury Hospitalizations, California, Females, All Ages, by County of Residence, 1992-99**

	8-Year Total	1992	1993	1994	1995	1996	1997	1998	1999	Average Annual Change* in Number of Injuries 1992-99
<b>CALIFORNIA TOTAL</b>	<b>21,693</b>	<b>3,436</b>	<b>3,217</b>	<b>2,965</b>	<b>2,697</b>	<b>2,506</b>	<b>2,645</b>	<b>2,241</b>	<b>1,986</b>	<b>-192**</b>
Alameda	1,406	242	210	194	147	156	166	160	131	-13**
Alpine	0	0	0	0	0	0	0	0	0	*
Amador	8	2	1	1	1	1	1	1	0	*
Butte	80	12	5	8	11	7	13	14	10	*
Calaveras	16	0	2	3	0	1	4	3	3	*
Colusa	3	0	0	0	0	0	0	1	2	*
Contra Costa	664	110	112	112	73	61	69	69	58	-9**
Del Norte	3	0	1	0	1	0	1	0	0	*
El Dorado	35	3	5	6	5	5	6	5	0	*
Fresno	500	58	83	68	75	53	65	52	46	-3
Glenn	17	5	1	4	0	1	0	2	4	*
Humboldt	51	12	9	2	9	5	6	6	2	*
Imperial	68	9	14	8	6	3	10	9	9	*
Inyo	7	1	0	1	1	2	1	1	0	*
Kern	409	59	60	55	50	45	54	50	36	-3***
Kings	43	3	6	7	7	10	2	6	2	*
Lake	34	1	11	4	6	4	2	3	3	*
Lassen	4	1	0	0	0	1	1	1	0	*
Los Angeles	8,035	1,345	1,237	1,107	1,013	960	955	752	666	-92***
Madera	44	3	3	2	7	5	10	8	6	*
Marin	68	11	6	9	9	4	11	6	12	*
Mariposa	2	1	0	1	0	0	0	0	0	*
Mendocino	41	5	4	7	6	6	6	4	3	*
Merced	70	7	11	7	9	10	7	7	12	*
Modoc	5	1	0	1	1	0	2	0	0	*
Mono	1	1	0	0	0	0	0	0	0	*
Monterey	125	19	20	14	20	13	21	11	7	*
Napa	34	5	4	3	3	3	2	7	7	*
Nevada	24	4	4	3	2	5	1	4	1	*
Orange	887	134	140	136	101	101	103	84	88	-8**
Placer	55	7	7	6	5	5	14	5	5	*
Plumas	8	1	1	2	1	1	1	1	0	*
Riverside	978	111	106	114	106	128	152	155	106	+4
Sacramento	1,489	223	204	219	223	173	176	140	131	-14**
San Benito	6	1	2	1	1	1	0	0	0	*
San Bernardino	1,131	165	147	142	162	140	137	131	107	-6*
San Diego	1,799	281	272	220	223	230	215	184	174	-14**
San Francisco	999	214	183	138	124	90	88	66	96	-19**
San Joaquin	404	72	54	72	51	35	54	41	25	-6***
San Luis Obispo	71	12	7	12	12	7	6	9	6	*
San Mateo	254	55	26	46	35	26	22	27	17	-4***
Santa Barbara	107	14	17	16	9	12	14	13	12	*
Santa Clara	471	66	68	60	46	54	66	45	66	-1
Santa Cruz	70	6	10	7	10	10	11	3	13	*
Shasta	78	13	9	9	11	6	12	13	5	*
Sierra	1	0	0	0	0	0	0	1	0	*
Siskiyou	13	1	3	4	2	1	0	1	1	*
Solano	194	28	29	21	25	21	20	24	26	-1
Sonoma	147	20	23	20	14	12	24	20	26	*
Stanislaus	238	35	26	30	29	31	29	34	24	-0
Sutter	24	2	6	2	4	2	4	2	2	*
Tehama	17	2	1	4	1	2	4	1	2	*
Trinity	15	3	2	2	1	1	5	1	0	*
Tulare	118	13	16	15	8	12	18	22	14	*
Tuolumne	19	1	0	0	1	3	8	1	5	*
Ventura	209	25	43	32	21	29	23	19	17	-2
Yolo	57	5	4	7	6	5	15	8	7	*
Yuba	37	6	2	2	1	7	8	8	3	*

Prepared by California Department of Health Services, EPIC Branch

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

\*Average annual change was calculated only if the annual average was 20 or greater.

\*\*p<.01

\*\*\*p<.05

**Table 16: Hospitalized Violent Injuries to Females in California by Weapon<sup>1</sup> and Principal Diagnosis,<sup>2</sup> All Ages, 1992-99**

Weapon	Principal Diagnosis										
	8-Year Total [Annual Average] (Row % <sup>3</sup> )	Head (head, face, skull, or neck)	Central Body (chest, trunk, abdomen, or back)	Upper Limbs	Lower Limbs	Non-Trauma Disease Process	Mental Disorder	Pregnancy- Related	Child Abuse	Adult Abuse	Other
<b>8-Year Total [Annual Average] (%)</b>	<b>21,693 [2712] (99.9)</b>	<b>5,972 [746] (27.5)</b>	<b>5,403 [675] (24.9)</b>	<b>2,719 [340] (12.5)</b>	<b>2,129 [266] (9.8)</b>	<b>1,772 [222] (8.2)</b>	<b>1,548 [194] (7.1)</b>	<b>985 [123] (4.5)</b>	<b>253 [32] (1.2)</b>	<b>159 [20] (0.7)</b>	<b>753 [94] (3.5)</b>
Unarmed Fight	6,108 [764] (100.0)	2,114 [264] (34.6)	1,062 [133] (17.4)	480 [60] (7.9)	472 [59] (7.7)	484 [60] (7.9)	657 [82] (10.8)	582 [73] (9.5)	8 [1] (0.1)	54 [7] (0.9)	195 [24] (3.2)
Firearms	3,786 [473] (100.0)	712 [89] (18.8)	1,451 [181] (38.3)	609 [76] (16.1)	848 [106] (22.4)	44 [6] (1.2)	7 [1] (0.2)	25 [3] (0.7)	0 [0] (0.0)	1 [<1] (0.0)	89 [11] (2.3)
Cutting/Piercing	3,191 [399] (100.0)	588 [74] (18.4)	1,801 [225] (56.4)	528 [66] (16.6)	108 [14] (3.4)	60 [8] (1.9)	42 [5] (1.3)	15 [2] (0.5)	1 [<1] (0.0)	5 [1] (0.2)	43 [5] (1.3)
Striking By Object	1,848 [231] (99.9)	1,057 [132] (57.2)	201 [25] (10.9)	231 [29] (12.5)	95 [12] (5.1)	103 [13] (5.6)	58 [7] (3.1)	49 [6] (2.6)	3 [<1] (0.2)	12 [2] (0.6)	39 [5] (2.1)
Abuse And Neglect <sup>4</sup>	1,473 [184] (100.0)	343 [43] (23.3)	102 [13] (6.9)	72 [9] (4.9)	143 [18] (9.7)	282 [35] (19.1)	248 [31] (16.8)	26 [3] (1.8)	158 [20] (10.7)	26 [3] (1.8)	73 [9] (5.0)
Rape	577 [72] (99.8)	88 [11] (15.2)	163 [20] (28.2)	26 [3] (4.5)	7 [1] (1.2)	72 [9] (12.5)	139 [17] (24.1)	51 [6] (8.8)	7 [1] (1.2)	3 [<1] (0.5)	21 [3] (3.6)
Intimate Partner Abuse <sup>5</sup>	530 [66] (100.1)	77 [24] (14.5)	80 [25] (15.1)	30 [9] (5.7)	19 [6] (3.6)	86 [26] (16.2)	89 [27] (16.8)	93 [29] (17.6)	1 [<1] (0.2)	32 [10] (6.0)	23 [7] (4.3)
Poisoning	153 [19] (99.9)	2 [<1] (1.3)	1 [<1] (0.6)	1 [<1] (0.6)	1 [<1] (0.6)	16 [2] (10.5)	18 [2] (11.8)	4 [<1] (2.6)	2 [<1] (1.3)	0 [0] (0.0)	108 [14] (70.6)
Pushing from High Place	86 [11] (99.9)	15 [2] (17.4)	27 [3] (31.4)	10 [1] (11.6)	26 [3] (30.2)	1 [<1] (1.2)	2 [<1] (2.3)	3 [<1] (3.5)	0 [0] (0.0)	0 [0] (0.0)	2 [<1] (2.3)
Hot Liquids/Corrosive Substances	74 [9] (99.9)	18 [2] (24.3)	21 [3] (28.4)	6 [1] (8.1)	18 [2] (24.3)	2 [<1] (2.7)	2 [<1] (2.7)	0 [0] (0.0)	3 [<1] (4.0)	1 [<1] (1.4)	3 [<1] (4.0)
Strangulation/Hanging	68 [8] (100.2)	15 [2] (22.1)	6 [1] (8.8)	4 [<1] (5.9)	0 [0] (0.0)	8 [1] (11.8)	5 [1] (7.4)	1 [<1] (1.5)	1 [<1] (1.5)	1 [<1] (1.5)	27 [9] (39.7)
Bombs/Explosives	54 [7] (100.0)	6 [1] (11.1)	15 [2] (27.8)	14 [2] (25.9)	7 [1] (13.0)	4 [<1] (7.4)	1 [<1] (1.8)	0 [0] (0.0)	0 [0] (0.0)	0 [0] (0.0)	7 [1] (13.0)
Fire	52 [6] (100.0)	12 [2] (23.1)	9 [1] (17.3)	13 [2] (25.0)	3 [<1] (5.8)	4 [<1] (7.7)	3 [<1] (5.8)	0 [0] (0.0)	1 [<1] (1.9)	0 [0] (0.0)	7 [1] (13.4)
Drowning/Submersion	6 [1] (100.0)	3 [<1] (50.0)	0 [0] (0.0)	0 [0] (0.0)	0 [0] (0.0)	0 [0] (0.0)	2 [<1] (33.3)	0 [0] (0.0)	0 [0] (0.0)	0 [0] (0.0)	1 [<1] (16.7)
All Other Specified and Unspecified	3,687 [461] (100.0)	922 [115] (25.0)	464 [58] (12.6)	695 [87] (18.8)	382 [48] (10.4)	606 [76] (16.4)	275 [34] (7.5)	136 [17] (3.7)	68 [8] (1.8)	24 [3] (0.6)	115 [14] (3.2)

Prepared by California Department of Health Services, EPIC Branch

Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

<sup>1</sup> Principal E-code.

<sup>2</sup> Principal diagnosis code.

<sup>3</sup> May not total to 100 percent due to rounding.

<sup>4</sup> Excludes intimate partner abuse (E-code 967.3).

<sup>5</sup> Available only from October 1996 - December 1999. All annual averages for this category were calculated based on 3.25 years of data.

**Table 17: Hospitalized Violent Injuries in California by Reason for Injury, Length of Stay in the Hospital, Average Charges Billed for Treatment, and Total Injury Charges per Year, All Ages, 1992-99**

Weapon	Average Charges Billed for Treatment <sup>1</sup> (in thousands of dollars)		Average Length of Hospital Stay <sup>2</sup> (in days)		Total Charges Billed per Year <sup>1</sup> (in millions of dollars)	
	Dollars x 1,000	95% CI	Days	95% CI	Dollars x 1,000,000	95% CI
<b>ALL</b>	<b>17.4</b>	<b>16.9;17.9</b>	<b>5.1</b>	<b>5.0;5.3</b>	<b>44.9</b>	<b>42.6;47.2</b>
Unarmed Fight	12.2	11.7;12.7	4.3	3.9;4.6	8.9	8.3;9.5
Firearms	26.7	25.1;28.3	6.7	6.4;7.1	12.2	10.6;13.8
Cutting/Piercing	16.7	15.9;17.6	3.8	3.7;4.0	6.5	6.0;7.0
Striking by Object	15.2	14.1;16.3	4.1	3.8;4.4	3.4	3.1;3.7
Abuse and Neglect	22.9	20.3;25.5	8.4	7.7;9.1	4.0	3.4;4.6
Intimate Partner Abuse	11.6	15.2;15.2	3.8	3.4;4.2	1.7	0.7;2.6
Rape	11.6	10.4;12.8	5.0	4.4;5.5	0.8	0.6;1.0
Poisoning	12.8	8.0;17.5	4.1	3.1;5.1	0.2	0.1;0.3
Fire	54.8	29.8;79.8	15.0	10.0;19.0	0.4	0.1;0.6
Bombs/Explosives	36.9	17.0;56.8	9.5	4.6;14.0	0.2	0.1;0.4
Pushing from High Place	20.2	14.3;26.1	5.3	4.2;6.5	0.2	0.1;0.3
Strangulation/Hanging	30.4	10.8;49.9	5.2	2.7;7.8	0.2	0.1;0.4
Hot Liquids/Corrosive Substances	36.1	24.5;47.7	11.0	8.5;13.0	0.3	0.2;0.5
Drowning/Submersion	6.7	3.1;10.3	3.4	1.0;5.8	0.0	0 <sup>3</sup> ;0.0
All Other Specified and Unspecified	15.9	14.7;17.2	5.1	4.9;5.3	6.8	6.0;7.5

Prepared by California Department of Health Services, EPIC Branch  
Source: California Office of Statewide Health Planning and Development, Patient Discharge Data

<sup>1</sup> n=20,634

<sup>2</sup> n=20,546

<sup>3</sup> Calculations for the lower boundary of the confidence interval for this cause yielded a number less than zero. Since it is not possible to have a dollar value less than zero, we have represented the lower boundary as a zero in the table for ease of interpretation.

## Section IV: Intimate Partner Physical Violence

In earlier sections of this report, we looked only at violence resulting in injury or death. In this section of the report, we used data from the 1998 and 1999 California Women's Health Survey (CWHs) to focus on women's reports of their own experiences with physical assault and abuse, regardless of whether they were injured as a result. Due to the limitations of the CWHs, we can provide information only on intimate partner physical violence (IPPV) against women. No information is available on physical violence and abuse by friends, nonintimate family members, and other types of perpetrators. We address the following questions:

1. How often are women assaulted by their intimate partners?
2. How severe is the violence used in IPPV assaults?
3. Are some women more likely to be victims of IPPV than others (e.g., immigrant women, poor women, married women)?
4. Are pregnant women more likely to be victims of IPPV?
5. Is there more IPPV in households with children than in households without?
6. How many children in California live in households where women are victims of intimate partner violence? What ages are they likely to be?
7. Are women who have poor health, limited access to health care, and increased risk for chronic diseases more likely to be victims of intimate partner violence?

**Assaults by intimate partners.** For each year 1998 and 1999, 5.8 percent of California women, more than 620,000, experienced some form of physical violence from their intimate partners (Table 18). The victims were usually under age 45 (86 percent), were most often either white (40 percent) or Hispanic (35 percent), were most likely to be married (38 percent), and were born in the U.S. (75 percent).

**Severity of violence.** The IPPV questions in the CWHs are based on the Conflict Tactics Scale (CTS) (see Appendix for details). CTS is a series of questions asking respondents about the types of violence they have experienced. We considered women to be victims of physical violence if they reported that they had experienced one or more of the following within the past 12 months: being pushed, grabbed, shoved, slapped, kicked, bitten, hit with a fist, hit with an object, beaten up, choked, threatened with a knife or gun, or assaulted with a knife or gun.

Following the classification used by the researchers who developed CTS, we labeled violent behaviors as "minor" or "serious" depending on their level of severity. Women were victims of minor violence if they reported being pushed, grabbed, shoved, or slapped. Women were victims of serious violence if they reported being kicked, bitten, hit with a fist, hit with an object, beaten up, choked, threatened with a knife or gun, or assaulted with a knife or gun.

We found that 5.8 percent of California women, or 621,323, were victims of physical violence each year (Table 18). About 95 percent of those women were victims of minor violence (587,575 women). Serious violence was less common. Slightly more than 40 percent of women who experienced any physical violence were victims of serious violence (256,612 women). Almost all women who experienced severe violence also experienced minor violence. Only five percent of victims experienced severe violence without minor violence.

**Table 18: Intimate Partner Physical Violence against Women in California, 1998-99, by Severity of Violence, Age, Race, Marital Status, and Country of Birth of the Victim**

Victim Characteristics	Minor Physical Violence <sup>1</sup>			Serious Physical Violence <sup>2</sup>			Physical Violence <sup>3</sup>		
	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims
<b>ALL</b>	<b>5.5</b>	<b>5.0-6.0</b>	<b>587,575</b>	<b>2.4</b>	<b>2.0-2.7</b>	<b>256,612</b>	<b>5.8</b>	<b>5.3-6.3</b>	<b>621,323</b>
AGE									
18-44	8.3	7.4-9.1	500,958	3.5	3.0-4.1	212,909	8.7	7.8-9.5	525,594
45+	1.9	1.4-2.3	86,617	0.9	0.6-1.3	43,703	2.1	1.5-2.6	95,729
RACE									
Black	10.2	7.3-13.1	76,796	5.5	3.3-7.6	41,079	11.0	8.0-14.0	82,373
Hispanic	7.9	6.8-9.1	208,914	3.6	2.8-4.4	93,652	8.3	7.1-9.5	218,418
White	4.0	3.5-4.6	245,610	1.5	1.1-1.8	88,972	4.2	3.6-4.8	255,118
Asian/Pacific Islander/Other	4.5	2.7-6.3	56,255	2.6	1.2-4.0	32,908	5.2	3.3-7.1	65,414
MARITAL STATUS									
Married	3.8	3.2-4.4	221,511	1.4	1.0-1.7	78,991	4.0	3.5-4.6	235,837
Unmarried couple	10.7	7.6-13.7	56,337	3.8	1.9-5.6	19,845	11.3	8.2-14.5	59,987
Separated	15.3	10.6-20.1	52,663	9.7	5.8-13.6	33,400	15.3	10.6-20.1	52,663
Divorced	7.3	5.5-9.0	95,375	3.1	1.9-4.2	40,411	7.8	6.0-9.6	102,602
Widowed	1.1	0.2-2.0	9,594	0.8	0.0-1.6	7,169	1.1	0.2-2.0	9,594
Never married	8.3	6.6-10.0	152,095	4.2	3.0-5.4	76,797	8.8	7.1-10.5	160,638
BORN IN U.S.									
Yes	5.5	4.9-6.1	434,999	2.4	2.0-2.8	188,142	5.9	5.3-6.5	463,421
No	5.4	4.3-6.4	152,576	2.4	1.7-3.1	68,470	5.6	4.5-6.6	157,902

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, California Women's Health Survey; California Department of Finance, Race/Ethnic Population with Age and Sex Detail.

<sup>1</sup> "Minor violence" includes being pushed, grabbed, shoved, or slapped on at least one occasion within the past year.

<sup>2</sup> "Serious violence" includes being kicked, bitten, hit with a fist, hit or victim of an attempt to be hit with something, beaten up, choked, threatened with a knife or gun, or being the victim of a knife or gun assault on at least one occasion within the past year.

<sup>3</sup> "Physical violence" includes all serious and minor violence.

**Demographic Factors and IPPV (Table 18):**

*Age.* Younger women (under age 45) had higher rates of IPPV than older women. In fact, 8.7 percent of younger women experienced physical violence, compared to 2.1 percent of older women, making younger women more than four times more likely to be victims. This was true for both minor (4.4 times more likely) and serious (3.9 times more likely) violence.

*Race.* Black women were the most likely to experience IPPV, with 11 percent reporting any physical violence. This was significantly higher than the proportion of white (4.2 percent) and Asian/other (5.2 percent) women victims. Hispanic women, with 8.3 percent reporting that they were victims, were about as likely to experience physical violence as black women and Asian/other women, but were significantly more likely to be victims than white women.

*Marital status.* Women who were separated appeared to be the most likely to experience any physical violence, with 15.3 percent of separated women reporting any assault or abuse. Separated women were much more likely to experience serious violence than women of any other marital status. (Unfortunately, we do not know if the separation occurred before or after the violence. It is possible that these women may have been married at the time there was violence, and subsequently separated.) Widowed women were the least likely to be victims, with only 1.1 percent reporting that they were victims of physical violence.

*Country of birth.* Women born in the U.S. and those born elsewhere were equally likely to be IPPV victims. This was true for both minor and severe violence.

**Social and economic disadvantage.** CWHHS asked several questions that give us insights into the economic and employment conditions of women in California. We looked at five indicators—household income, hunger, poverty, employment status, and educational attainment—to learn whether there was a relationship between IPPV and social and economic disadvantage (Table 19).

*Income.* Low-income women (women with household incomes of less than \$15,000 per year) had much higher rates of IPPV (8.9 percent) than women with household incomes greater than \$15,000 (5.1 percent). In the case of minor violence, low-income women were 1.8 times more likely to experience IPPV. The difference was even greater for serious violence, with low-income women being 2.8 times more likely to experience IPPV.

*Poverty status.* Using the U.S. Government poverty thresholds for the years of the survey, we looked at the relationship between poverty status and IPPV. We found that more than one in ten women living at or below the poverty level experienced some physical violence (10.7 percent). These women were significantly more likely to report being IPPV victims than women living within 200 percent of the poverty level (7.0 percent) or the highest income women, those living over 200 percent of the poverty level (4.1 percent).

The difference between women living below the poverty level and the highest income women is especially striking. Women below the poverty level were 2.6 times more likely to experience any physical violence than the highest income women. They were 2.8 times more likely to be victims of minor violence, and 4.6 times more likely to be victims of serious violence.

**Table 19: Intimate Partner Physical Violence Against Women in California, 1998-99, by Severity of Violence and Socioeconomic Status of Victims**

Victim Characteristics	Minor Physical Violence <sup>1</sup>			Serious Physical Violence <sup>2</sup>			Physical Violence <sup>3</sup>		
	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of California Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of California Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of California Victims
<b>ALL<sup>4</sup></b>	<b>5.5</b>	<b>5.0-6.0</b>	<b>587,575</b>	<b>2.4</b>	<b>2.0-2.7</b>	<b>256,612</b>	<b>5.8</b>	<b>5.3-6.3</b>	<b>621,323</b>
<b>INCOME<sup>5</sup></b>									
<\$15,000	8.6	7.1-10.1	182,142	4.8	3.7-5.9	101,199	8.9	7.4-10.4	187,676
\$15,000 or more	4.8	4.2-5.3	376,012	1.8	1.5-2.2	145,653	5.1	4.5-5.7	404,225
<b>EXPERIENCED HUNGER<sup>6</sup></b>									
Yes	18.7	15.0-22.3	126,628	8.3	5.7-10.8	56,042	18.9	15.3-22.6	128,567
No	4.6	4.1-5.1	460,947	2.0	1.7-2.3	200,570	4.9	4.4-5.4	492,756
<b>POVERTY STATUS<sup>7</sup></b>									
At or below federal poverty level	10.5	8.7-12.2	192,473	6.0	4.7-7.4	110,767	10.7	8.9-12.5	196,650
101-200% of federal poverty level	6.7	5.4-8.1	135,111	2.8	1.9-3.7	56,587	7.0	5.7-8.4	141,184
More than 200% of federal poverty level	3.7	3.2-4.3	226,266	1.3	1.0-1.6	78,047	4.1	3.5-4.7	249,762
<b>EMPLOYMENT STATUS<sup>8</sup></b>									
Full-time	5.3	4.4-6.1	209,092	1.8	1.3-2.3	71,765	5.6	4.7-6.4	220,508
Part-time	6.6	5.0-8.2	93,310	2.8	1.7-3.8	39,201	7.1	5.4-8.7	99,435
Self-employed	4.2	2.5-5.9	30,963	2.3	1.0-3.5	16,743	4.5	2.7-6.2	33,237
Out of work less than one year	14.5	9.2-19.8	37,667	5.4	2.0-8.8	14,053	15.2	9.8-20.6	39,518
Out of work more than one year	10.3	6.5-14.1	37,396	6.5	3.4-9.6	23,551	10.7	6.8-14.6	38,752
Homemaker	5.1	3.9-6.3	85,799	3.1	2.1-4.1	52,418	5.5	4.3-6.8	93,125
Student	7.7	4.6-10.8	37,269	3.1	1.1-5.1	14,952	8.1	4.9-11.3	39,315
Retired	0.6	0.1-1.1	8,196	0.2	0-0.5	3,006	0.6	0.1-1.1	8,196
Unable to work	9.9	6.5-13.2	47,883	4.3	2.0-6.6	20,922	10.1	6.8-13.5	49,238
<b>EDUCATIONAL ATTAINMENT<sup>9</sup></b>									
No high school diploma	7.6	6.2-9.1	137,425	3.8	2.7-4.9	68,607	7.8	6.3-9.3	140,248
Completed high school	6.5	5.4-7.6	174,143	2.7	1.9-3.4	71,855	6.8	5.7-8.0	182,944
Some schooling beyond high school	5.7	4.7-6.7	188,346	2.4	1.8-3.0	78,849	6.1	5.1-7.1	201,338
College graduate	3.0	2.2-3.7	87,661	1.3	0.8-1.7	37,301	3.3	2.5-4.0	96,793

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, California Women's Health Survey; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> "Minor violence" includes being pushed, grabbed, shoved, or slapped on at least one occasion within the past year.

<sup>2</sup> "Serious violence" includes being kicked, bitten, hit with a fist, hit with or victim of an attempt to be hit with something, beaten up, choked, threatened with a knife or gun, or being the victim of a knife or gun assault on at least one occasion within the past year.

<sup>3</sup> "Physical violence" includes all forms of minor and serious violence as described above.

<sup>4</sup> n=7,295

<sup>5</sup> n=6,835

<sup>6</sup> n=7,294; "In the last 12 months, were you ever hungry but didn't eat because you couldn't afford enough food."

<sup>7</sup> n=6,783; based on household income and U.S. poverty threshold for the year of data collection.

<sup>8</sup> n=7,290

<sup>9</sup> n=7,293

*Hunger status.* Women experiencing hunger in the past month because there was not enough money to buy food had much higher rates of IPPV than any other women. Nearly one in five women who experienced hunger also experienced IPPV (18.9 percent). These women were about four times more likely to experience physical violence, both minor and serious, than women who did not go hungry.

*Employment status.* Recently unemployed women—those who had been out of work for less than one year—appeared to have the highest rate of physical violence (15.2 percent). However, other unemployed women (10.7 percent), women who were unable to work (10.1 percent), or students (8.1 percent) were just as likely to be victims as recently unemployed women. Women who were retired had the lowest risk of IPPV (0.6 percent).

*Educational attainment.* College graduates were much less likely to be victims of physical violence (3.3 percent) than women with less education. Women who had no high school diploma, had completed high school, or had some schooling beyond high school were not different from each other in their risk for IPPV.

**IPPV and pregnancy status.** About 6.6 percent of pregnant women in California experienced some physical violence within the past year (Table 20). (Unfortunately, we do not know if the violence occurred before or during the pregnancy, or both. It is possible that these women experienced violence before the pregnancy, but not during the pregnancy.) The rate is no higher than that for nonpregnant women in the same age group (18-49 years) (8.1 percent). However, the size of the rate means that nearly 18,000 pregnant women in California may be at risk for violence during pregnancy. Of special concern are the 9,064 pregnant women who may be at risk for serious physical violence. Being a victim of violence during pregnancy has been linked to adverse outcomes for fetus and mother, such as low birth weight.

**IPPV and presence of children in the household.** About 8.5 percent of women living in households with children, nearly 440,000, were victims of physical violence (Table 21). There were, on average, 2.1 children in households where children were present and women experienced physical violence. Therefore, we estimate that in 1998 and 1999, about 916,000 children per year lived in households with women experiencing IPPV. About 404,000 of these children lived in households where women experienced serious violence.

The presence of very young children was strongly associated with higher rates of IPPV. More than one in ten households with children aged five and younger (11.4 percent) experienced some physical violence, compared to households with children older than age five (6.8 percent) (Table 21). Of the 916,000 children exposed to violence, we estimate that 541,000, or 59 percent, were under age six. Of the 404,000 children exposed to serious violence, an estimated 263,000, or 65 percent, were under age six.

Finally, we compared women living in households with children to women of the same age living in households without children (Table 20). We hoped to learn whether women living in households with children had higher rates of IPPV. We limited our comparison to women under age 50. Experiencing IPPV and living in households with children were very uncommon among women age 50 and older, making the comparison less appropriate.

**Table 20: Intimate Partner Physical Violence Against Women, by Pregnancy Status and Presence of Children in the Household, Women Aged 18-49, California, 1998-99**

Victim Characteristics	Minor Physical Violence <sup>1</sup>			Serious Physical Violence <sup>2</sup>			All Physical Violence <sup>3</sup>		
	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims
<b>ALL<sup>4</sup></b>	<b>7.6</b>	<b>6.9-8.3</b>	<b>539,944</b>	<b>3.3</b>	<b>2.8-3.8</b>	<b>236,668</b>	<b>8.0</b>	<b>7.2-8.8</b>	<b>568,238</b>
Pregnancy status <sup>5</sup>									
Pregnant	6.1	2.9-9.4	16,435	3.4	0.9-5.8	9,064	6.6	3.3-10.0	17,790
Not pregnant	7.7	6.9-8.4	523,509	3.3	2.8-3.8	226,721	8.1	7.3-8.8	549,565
Children present in the household <sup>6</sup>									
One or more	8.7	7.8-9.7	408,532	4.1	3.3-7.6	189,587	9.2	8.2-10.1	427,758
None	5.4	4.3-6.5	131,413	1.9	1.3-2.6	47,081	5.8	4.6-6.9	140,480

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, California Women's Health Survey; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> "Minor violence" includes being pushed, grabbed, shoved, or slapped on at least one occasion within the past year.

<sup>2</sup> "Serious violence" includes being kicked, bitten, hit with a fist, hit with or victim of an attempt to be hit with something, beaten up, choked, threatened with a knife or gun, or being the victim of a knife or gun assault on at least one occasion within the past year.

<sup>3</sup> "Physical violence" includes all forms of minor and serious violence as described above.

<sup>4</sup> Because intimate partner physical violence against women is uncommon among older women, and very few older women in this study had children present in the household (only seven percent of households with a child belonged to respondents aged 50 and older), only women aged 18-49 have been included in this comparison (n=4,971).

<sup>5</sup> n=4,961

<sup>6</sup> n=4,970

**Table 21: Intimate Partner Physical Violence Against Women in Households with Children, by Age of Children, California, 1998-99**

Victim Characteristics	Minor Physical Violence <sup>1</sup>			Serious Physical Violence <sup>2</sup>			Physical Violence <sup>3</sup>		
	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims
<b>ALL<sup>4</sup></b>	<b>8.1</b>	<b>7.2-9.0</b>	<b>417,125</b>	<b>3.7</b>	<b>3.1-4.3</b>	<b>192,268</b>	<b>8.5</b>	<b>7.6-9.4</b>	<b>436,352</b>
Children under age 6									
One or more	10.2	8.8-11.5	259,980	5.1	4.1-6.2	131,640	11.4	9.9-12.8	270,590
None	6.1	5.0-7.2	157,145	2.3	1.7-3.0	60,628	6.8	5.6-8.0	155,759
Children age 6-12									
One or more	7.8	6.7-8.9	226,850	3.5	2.7-4.3	102,591	8.0	6.9-9.2	233,738
None	8.5	7.1-9.9	190,275	4.0	3.0-5.0	89,677	9.1	7.6-10.5	202,614
Children age 13-17									
One or more	7.2	5.9-8.6	138,922	2.9	2.0-3.8	55,081	7.4	6.0-8.8	142,552
None	8.6	7.5-9.8	278,203	4.2	3.4-5.1	137,186	9.1	7.9-10.3	293,800

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services, California Women's Health Survey; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> "Minor violence" includes being pushed, grabbed, shoved, or slapped on at least one occasion within the past year.

<sup>2</sup> "Serious violence" includes being kicked, bitten, hit with a fist, hit with or victim of an attempt to be hit with something, beaten up, choked, threatened with a knife or gun, or being the victim of a knife or gun assault on at least one occasion within the past year.

<sup>3</sup> "Physical violence" includes all forms of minor and serious violence as described above.

<sup>4</sup> n=3,687

Nearly one in ten women under age 50 living in households with children was a victim of physical violence (9.2 percent). Only 5.8 percent of women in this age group living in households without children experienced IPPV. Overall, women with children were 1.6 times more likely to be IPPV victims than women without children. The difference was more pronounced for serious violence; women living with children were 2.2 times more likely to experience serious violence than women without children.

**IPPV and health status of women.** We examined several health indicators to learn whether women who were victims of domestic violence were more likely to be in poor health than other women (Table 22). Researchers have found that there is a strong link between poor health and being a victim of violence. We also looked at two measures of access to health care (having a routine checkup within the past year and having health insurance), and two measures strongly related to the development of chronic disease (smoking cigarettes and binge drinking) to learn whether these factors are also linked with IPPV.

*Routine health care.* Women who went to the doctor for a routine medical examination in the past year were much less likely to be victims of physical violence (5.1 percent) than women who had not had a routine checkup (7.6 percent). This was true for both minor and serious violence.

*Health insurance status.* About one in ten women (10.3 percent) who had no health care coverage experienced physical violence. They were 2.1 times more likely to be victims than women who had some kind of health insurance (4.9 percent). They were almost three times more likely to be victims of serious violence.

*General health status.* Women who rated their general health status as “fair” or “poor” were much more likely to experience physical violence (7.7 percent) than women who gave their health status a higher rating (“excellent,” “very good,” or “good”) (5.4 percent). Women in poor health were more likely to be victims of both minor and serious violence.

*Days of poor mental health.* Women who reported one or more days of poor mental health in the past month were far more likely to be victims of physical violence (8.8 percent) than women who did not have any days of poor mental health (3.2 percent). In fact, women with one or more days of poor mental health were 2.8 times more likely to be victims of minor violence, and 3.5 times more likely to be victims of serious violence than women with no days of poor mental health.

*Days of poor physical health.* Women who reported one or more days of poor physical health in the past month were more likely to be victims of physical violence (7.1 percent) than women who did not have any days of poor physical health (5.0 percent). They were significantly more likely to experience both minor and serious physical violence.

*Cigarette smoking.* Women who smoked cigarettes were much more likely to be victims of IPPV than those who did not smoke. More than one in ten women who smoked cigarettes (11.0 percent) was a victim of physical violence. This was 2.3 times higher than the rate for women who did not smoke (4.7 percent). Women who smoked were 3.2 times more likely to be victims of serious violence (5.4 percent) than women who did not smoke (1.7 percent).

**Table 22: Intimate Partner Physical Violence Against Women in California, by Various Health Indicators, 1998-1999**

	Minor Physical Violence <sup>1</sup>			Serious Physical Violence <sup>2</sup>			Physical Violence <sup>3</sup>		
	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims	% Victimized Within Past Year	95% Confidence Interval	Estimated Number of Victims
<b>ALL<sup>4</sup></b>	<b>5.5</b>	<b>5.0-6.0</b>	<b>587,575</b>	<b>2.4</b>	<b>2.0-2.7</b>	<b>256,612</b>	<b>5.8</b>	<b>5.3-6.3</b>	<b>621,323</b>
Had a routine doctor visit within the past year <sup>5</sup>									
Yes	4.8	4.2-5.3	366,804	1.9	1.6-2.3	148,457	5.1	4.5-5.7	391,057
No	7.3	6.2-8.5	217,522	3.6	2.8-4.4	107,304	7.6	6.5-8.8	227,017
Has health insurance <sup>6</sup>									
Yes	4.6	4.1-5.2	170,393	1.8	1.5-2.2	166,103	4.9	4.4-5.5	442,710
No	9.8	8.1-11.5	417,182	5.2	3.9-6.5	90,509	10.3	8.6-12.0	178,613
General health status <sup>7</sup>									
Excellent, Very Good, or Good	5.0	4.5-5.6	452,622	2.1	1.8-2.5	190,376	5.4	4.8-6.0	485,419
Fair or Poor	7.7	6.1-9.2	134,002	3.8	2.7-4.9	66,236	7.7	6.2-9.3	134,953
Days of poor mental health in the past month <sup>8</sup>									
None	3.0	2.5-3.6	174,968	1.1	0.8-1.5	65,617	3.2	2.7-3.8	186,466
One or more	8.4	7.5-9.3	410,502	3.9	3.2-4.6	190,995	8.8	7.9-9.8	432,751
Days of poor physical health in the past month <sup>9</sup>									
None	4.7	4.1-5.3	313,047	1.7	1.3-2.1	114,271	5.0	4.4-5.6	332,649
One or more	6.8	5.8-7.7	273,374	3.5	2.8-4.2	141,352	7.1	6.1-8.1	286,532
Smokes cigarettes <sup>10</sup>									
Yes	10.4	8.7-12.1	196,524	5.4	4.2-6.7	102,906	11.0	9.2-12.7	208,088
No	4.4	3.9-5.0	391,051	1.7	1.4-2.1	153,706	4.7	4.2-5.2	413,235
Binge drinking <sup>11</sup>									
Yes	12.0	9.2-14.7	99,274	4.5	2.7-6.2	37,040	12.6	9.8-15.4	104,605
No	4.9	4.4-5.4	484,240	2.2	1.9-2.6	218,162	5.2	4.7-5.7	512,657

Prepared by California Department of Health Services, EPIC Branch

Source: California Department of Health Services; California Women's Health Survey; California Department of Finance, Race/Ethnic Population with Age and Sex Detail

<sup>1</sup> "Minor violence" includes being pushed, grabbed, shoved, or slapped on at least one occasion within the past year.

<sup>2</sup> "Serious violence" includes being kicked, bitten, hit with a fist, hit with or victim of an attempt to be hit with something, beaten up, choked, threatened with a knife or gun, or being the victim of a knife or gun assault on at least one occasion within the past year.

<sup>3</sup> "Physical violence" includes all forms of minor and serious violence as described above.

<sup>4</sup> n=7,295

<sup>5</sup> n=7,261

<sup>6</sup> n=7,290

<sup>7</sup> n=7,290

<sup>8</sup> n=7,256

<sup>9</sup> n=7,249

<sup>10</sup> n=7,285

<sup>11</sup> n=7,280

*Binge drinking.* Binge drinking was strongly linked to higher rates of IPPV. One in eight women who had binged one or more times in the past month was a victim of IPPV (12.6 percent). This was 2.4 times the rate for women who did not binge drink (5.2 percent).

## Discussion

This report has considered the problem of violence against women in California. We have seen that violence is not a single phenomenon, but is rather a range of behaviors: from lethal force resulting in homicide to “minor” violence such as slapping and biting.

A public health view of violence suggests that the kinds of injuries and assaults reported here are preventable. Like everyone else, we welcome the dramatic decline in violence against women that took place during the 1990s, but we observe that women in California continue to be hospitalized and die from violent injuries in unacceptably high numbers. In 1999, the most recent year for which we have data, 415 women died from assaults, 1,986 required hospitalization for treatment of violent injuries, and about 620,000 were victims of intimate partner assault.

We found that some subgroups of women become victims of violence at higher rates than others, and that we can identify contributing circumstances likely to lead to violence. This knowledge may provide opportunities for prevention. For example, when women were victims of violence, some weapons were more common than others. The majority of fatal injuries were the result of an assault with a firearm. Nonfatal injuries were most frequently the result of an unarmed fight—that is, one individual used his or her feet, fists, or personal force to inflict injuries on another. Another example is the high rate at which violence occurred in some age, race, and social groups. Black women had a higher rate of homicide, nonfatal hospitalized injuries, and IPPV than most other race groups. Women aged 13-45 almost always experienced violence at higher rates than young children or older women. Socially and economically disadvantaged women were generally more likely to be victims of intimate partner violence than other women.

It is especially notable that so many women are in great danger from their intimate partners. When women died from fatal assaults, the perpetrators were intimate partners one-third of the time. At least 251 women per year were hospitalized because they were victims of nonfatal violent assaults by their intimate partners. This represents nine percent of all women’s violent injury hospitalizations, and is probably greatly underestimated because of common documentation practices in hospitals. By their own reports, more than 620,000 women per year were victims of intimate partner violence. More than 250,000 of those women were victims of serious violence, the kind most likely to result in injuries.

Finally, our findings on the presence of children in households where women are victims of intimate partner violence provide strong support for an integrated family violence prevention strategy. Such efforts should take into account the co-occurrence of many facets of violence within families, including the emotional, physical, and sexual abuse of women, children, and elders. More than 916,000 children may be witnesses to intimate partner violence in California each year, including the more than 400,000 in households where the violence is serious enough to represent a strong risk of injury to the woman. Researchers believe that child abuse and neglect may occur in as many as 40 percent of families where intimate partner violence is also present.<sup>12</sup> Considering the problem of intimate partner violence or child abuse alone will not be effective in preventing violence in these families.



## Appendix: Data and Methods

**Nonfatal hospitalized violent injuries.** We obtained data on nonfatal hospitalized violent injuries from the Patient Discharge Data provided by the OSHPD. In California, hospitals must report external cause of injury codes (E-codes) for all hospitalized injuries. Since an E-code is required only for the hospitalization during which the injury was first diagnosed and treated, E-coded discharge records contain unduplicated hospitalized injury incidence data. In this report we included all California residents who were admitted to and discharged from a California acute care hospital between January 1992 and December 1999.

We considered an injury a “violent injury” if the principal E-code fell within the range of E-codes 960-968 in the International Classification of Diseases, Ninth Edition (ICD-9), “Homicide and Injury Purposely Inflicted by Other Person.” This is a medical definition, not a criminal justice definition. We did not include self-inflicted injuries in this report. Injured persons who died in the hospital were excluded from all analyses of nonfatal hospitalized violent injuries and included in the homicide analyses (n=502). We did this to avoid counting the same case more than once.

The principal E-code describes the type of weapon used to inflict the most severe injury or adverse effect. E-code definitions frequently undergo revisions. Use caution when interpreting categories grouped over time. We have made every effort to ensure that grouped data are comparable, however, if a category is of particular interest to you, go back and read the definitions. In the hospital discharge data more than one E-code can be reported, although one E-code is always designated as the principal E-code. Unless otherwise indicated all references to E-codes refer to the principal E-code only. E-codes have been grouped into categories for analytical purposes in this report (Table A).

<b>TABLE A: External Cause of Injury Codes Used to Define Weapon Categories</b>		
<b>Type of Weapons</b>	<b>External Cause of Injury Code (ICD-9)</b>	<b>External Cause of Injury Code (ICD-10)</b>
Firearms	E965-E965.4	X93-X95
Cutting/Piercing Instrument	E966	X99
Unarmed Fight	E960.0	Y04
Striking by Object	E968.2	Y00
Abuse and Neglect	E967.0-E967.9 (except E967.3), E968.4	Y061-Y069, Y071-Y079
Intimate Partner Abuse	E967.3	Y060, Y070
Rape	E960.1	Y05
Poisoning	E962.0-E962.9	X85, X88
Fire	E968.0	X97
Bombs/Explosives	E965.5-E965.9	X96
Pushing from High Place	E968.1	Y01
Strangulation/Hanging	E963	X91
Hot Liquids/Corrosive Substances	E968.3, E961	X86, X98
Drowning/Submersion	E964	X92
All Other Specified and Unspecified	E968.8-E968.9, E968.5-E968.6	Y02-Y03, Y08-Y09

**Homicides.** We obtained data on fatal assaults (homicides) from two sources: death certificate data obtained from the Vital Statistics Death Statistical Master File, provided by DHS, and Supplemental Homicide Report data (Homicide Datafile), provided by the California DOJ. We did not include unintentional injuries or suicides in this report.

*Death certificates.* When we used death certificate data we included California residents who died from assaults between January 1992 and December 1999. We considered a fatal injury to be the result of an assault if the principal E-code on the death certificate fell within the range of E-codes 960-968 in the ICD-9, or within the range X85-Y09 in the ICD-10. Use caution when interpreting categories grouped over time, especially after the introduction of the ICD-10 in 1999 (see “nonfatal hospitalized violent injuries” above for a more detailed discussion of E-codes) (Table A).

*Homicide Datafile.* When we used data from the Homicide Datafile we included all cases in which the death of the victim was the result of an attack by another person. This definition excluded cases of justifiable homicide and deaths due to negligent conduct. We included all persons who died from fatal assaults in California between January 1992 and December 1999.

Use caution when comparing statistics obtained from death certificates and the Homicide Datafile. These two sources may differ occasionally in their homicide totals, as they use slightly different definitions for homicide.

**Rates.** Unless otherwise specified, all rates in this report are crude gender-specific rates per 100,000 California population. In tables where rates are given by race, age, and county, those rates are race-, age-, and county-specific. We calculated all rates using the eight-year (1992-99) average as the numerator value. Because we used a series of years to obtain the numerator, we chose to use a mid-point year, 1995, as the denominator value. Therefore, all rates presented here can be interpreted as the average rate per year for the years 1992-99. We did not calculate rates when the annual average was less than 20 cases.

We used the following formula to calculate rates:

$$\text{Crude Rate} = \frac{\text{Eight-year average}}{1995 \text{ Population}} \times 100,000$$

If the 95 percent confidence intervals of two rates did not overlap, we considered the difference between those rates to be statistically significant. We calculated confidence intervals using the following formula:

$$\text{Crude Rate} \pm 1.96 \times \frac{\text{Crude Rate}}{\sqrt{\text{Eight year average}}}$$

**Denominator data.** DOF population projections served as denominators in our study. When we calculated rates for fatal and nonfatal injuries (Sections I-III of this report) we used the eight-year average for the numerator value (see “Rates,” above). Therefore, we chose a middle year, 1995, for the population denominators. Using a year earlier in the series would yield rate estimates that were inappropriately large, and using a later year would yield rates that were too small.

In Section IV we provided estimates of the number of women who are victims of IPPV in California. To obtain those estimates we used DOF’s 1998 intercensal population figures to create weights for the CWHs. These weights ensure that the sample of survey respondents is representative of all women in California, not just those who happened to answer the survey.

**Race.** Throughout the report we used four categories to describe race: non-Hispanic white (white), Hispanic, non-Hispanic black (black), and a combined category for Asians and persons of all other races (Asian/other or Other). Where race was unknown or missing we have indicated missing data. The various data sources we used were not in complete agreement on their definitions of race, and reported different levels of race detail. For example, the Homicide Datafile includes “Hispanic” as a race option rather than a separate ethnicity, while death certificates and hospital discharge data do not include “Hispanic” as one of the race categories, allowing it only as a separate ethnicity option. When we compared the race assignments in the death certificates and the Homicide Datafile, we found that they were in agreement in 93.5 percent of cases. Most of the discordance in race coding between the two files (44 percent) is due to race being reported as Hispanic in one data source and white in the other. CWHs provided more than 20 categories for race and a separate category for Hispanic ethnicity. As with the other datasets, there were too few cases to analyze the Asian/other category in finer detail.

**Age.** Age was measured in years in all datasets. Where age was unknown or missing we have indicated missing data.

**Location.** Information on location of the assault is available in the Homicide Datafile. We created two location categories: “In the victim’s home” and “not in the victim’s home.” “In the victim’s home” includes inside the dwelling as well as places in and around the victim’s residence, such as the yard and garage. If the victim shared his or her home with the perpetrator this was considered to be “in the victim’s home.” “Not in the victim’s home” includes all other places, such as the perpetrator’s residence (if not shared with the victim) or a public place such as a street or park.

**Weapon.** In the patient discharge data and the death certificates, “weapon” refers to the principal external cause of injury code, unless otherwise specified. In the Homicide Datafile, “weapon” refers to the means used to inflict the fatal injury. Use caution when comparing “weapon” obtained from death certificates and the Homicide Datafile. These sources may occasionally differ in their weapon totals, as they use slightly different definitions to determine what weapon was used to inflict the fatal injury.

**Source of payment.** “Source of payment” provides information on the payer of record, that is, the entity to which the hospital sends a bill for the hospital stay.

**Billed charges.** This report used “billed charges” as a measure of the cost of violent injury hospitalization. Billed charges cover all services performed during the initial hospitalization, except the physicians’ fees, for the first 365 days. Billed charges overstate actual revenue to the hospital since not all bills are collectable. Data for billed charges were missing in about five percent of hospitalizations.

**Length of stay.** “Length of stay” refers to the number of days between admission and discharge for the initial hospitalization. Data for length of stay were missing in about five percent of hospitalizations.

**Changes over time.** In most cases the number of fatal and nonfatal injuries dropped dramatically during the years of this study. We used regression analysis to calculate the average change in the number of cases per year and the statistical significance of that change. Using regression analysis allows us to calculate an average change per year that is not strongly affected by moderate ups and downs in the data, or by extremely high or low values at the beginning or end of the time series. The figures reported here for change over time can be interpreted as the average decrease (or increase) in the number of cases per year between 1992 and 1999. If an average change was not statistically significant it means the size of the change was not really different from zero.

We calculated the statistical significance of the decrease or increase at either the .05 or .01 level. When looking at the number of injuries that occur each year, we expect some differences from year to year, even when there is no real increase or decrease in the number of injuries over a period of years. “Statistical significance” at the .05 (.01) level means that a change of the size we found would be expected to happen only five times (one time) in 100 years if there were not truly a decrease or increase in the number of injuries.

**Diagnosis codes.** Hospitalization data report both the weapon used (e.g., firearms, struck by an object) and the diagnosis, or nature of the problem for which the individual was hospitalized (e.g., open wound, skull fracture, blood loss). We grouped diagnosis codes by the body part affected, where possible. Where it was not possible to group by body part, we grouped by similarity of diagnosis, such as “nontrauma disease process” or “pregnancy-related” (Table B).

<b>Table B: ICD-9 Diagnosis Codes Used to Create Principal Diagnosis Categories</b>	
<b>Principal Diagnosis Category</b>	<b>ICD-9 Diagnosis Code</b>
Head, face, skull, or neck	784.0-784.99, 800-805.19, 806-806.19, 830-830.99, 839.1, 850.0-854.99, 870.0-874.99, 900.0-900.99, 918.0-918.99, 910.0-910.99, 920-921.99, 925.0-925.99, 930.0-933.99, 940.0-941.99, 950.0-951.99
Central body (chest, trunk, abdomen, back)	785.0-786.99, 789.0-789.99, 805.2-805.99, 806.20-809.99, 839.2-839.9, 846-848.99, 860.0-869.99, 875.0-879.99, 901.0-902.99, 911.0-911.99, 913-913.99, 922.0-922.99, 926.0-926.99, 934.0-939.99, 942.0-942.99, 947.0-947.99, 952.0-954.99, 959.1
Upper limbs	810.00-819.99, 831-834.99, 840.00-842.99, 880.0-887.99, 903.0-903.99, 912.0-912.99, 914-914.99, 923.0-923.99, 927.0-927.99, 943.0-944.99, 915.0-915.99, 955.0-959.99, 959.2-959.5
Lower limbs	820.00-829.99, 835-838.99, 843.00-845.99, 890.0-897.99, 904.0-904.99, 806.00-806.19, 916.0-917.99, 924.0-924.99, 928.0-928.99, 945.0-945.99, 956.0-956.99, 959.6-959.7
Nontrauma disease process	001-134.0, 147.2-238.7, 242.0-279.03, 281.0-288.8, 320.1-384.20, 398.91-459.81, 461.8-519.8, 525.1-578.9, 584.9-628.0, 681.0-709.2, 710.0-738.4,
Mental disorder	290.0-313.81
Pregnancy-related	631-675.24, V220-V221, V240
Child abuse	995.5-995.59
Adult abuse	995.80-995.85
Other	All other codes

**CWHS.** We examined data from the CWHS for a 19-month period: June 1, 1998 - December 31, 1999. The CWHS is an ongoing statewide telephone survey, providing a representative random sample of women aged 18 and older living in households with telephones in California. Respondents answer a wide variety of questions on health and health-related behaviors.

Beginning in June 1998, the CWHS added a module of questions (IPPV module) asking women about their personal experiences with intimate partner violence. Respondents were told that they were going to be asked questions about how couples resolve problems and conflicts, and that “couple” could refer to having a current or former husband, partner, boyfriend, or girlfriend. We did not include respondents who stated that the questions did not apply to them because they had no current or former intimate partner during the 12 months prior to the survey.

We also did not include respondents who refused to complete the IPPV module. There were 8,169 CWSHS respondents, with 7,295 meeting the eligibility criteria for our study.

The CWSHS IPPV module asked a series of questions to find out what kinds of violent acts the respondent may have experienced at the hands of an intimate partner. The IPPV module is a modified form of the Conflict Tactics Scale (CTS), a series of questions developed to measure the prevalence and severity of family violence (Table C).<sup>13</sup>

Following the classification used by the researchers who developed CTS, we divided the IPPV questions into two types of violent acts: “minor” and “serious.” We considered respondents to be victims of minor violence if they reported being pushed, grabbed, shoved, or slapped on at least one occasion within the 12 months preceding the interview. We considered respondents to be victims of severe violence if they reported that on at least one occasion they were kicked, bitten, hit with a fist, hit with an object, beaten up, choked, threatened with a knife or gun, or assaulted by a perpetrator using a knife or gun. We also considered incidents in which the perpetrator tried to hit the victim with an object to be severe violence. In the text, when we refer to “IPPV” or “physical violence” we are referring to all forms of violence by intimate partners, both minor and serious.

Table C: CWSHS IPPV Module	
Question	Violence category
Thinking back over the last 12 months, was there ever an occasion when a partner pushed, grabbed, or shoved you?	Minor
Thinking back over the last 12 months, was there ever an occasion when a partner slapped you?	Minor
Thinking back over the last 12 months, was there ever an occasion when a partner kicked, bit, or hit you with a fist?	Serious
Thinking back over the last 12 months, was there ever an occasion when a partner hit or tried to hit you with something?	Serious
Thinking back over the last 12 months, was there ever an occasion when a partner beat you up?	Serious
Thinking back over the last 12 months, was there ever an occasion when a partner choked you?	Serious
Thinking back over the last 12 months, was there ever an occasion when a partner threatened you with a knife or gun?	Serious
Thinking back over the last 12 months, was there ever an occasion when a partner used a knife or fired a gun?	Serious

*Other CWHs questions.* The following is a list of questions from the CWHs that we used in this report and have not described elsewhere. Where data were missing for more than one percent of the respondents we have noted the percent missing:

Marital status: “Are you: married, divorced, widowed, separated, never been married, or a member of an unmarried couple?”

Country of birth: “In what country were you born?” We categorized respondents into two groups, those born in the U.S., and those born elsewhere.

Income: “Which of the following categories best describes your annual household income from all sources? Less than \$10,000; \$10,000 to less than \$15,000; \$15,000 to less than \$20,000; \$20,000 to less than \$25,000; \$25,000 to less than \$35,000; \$35,000 to less than \$50,000; \$50,000 to \$75,000; or over \$75,000?” We categorized respondents into those with household incomes less than \$15,000, and those with household incomes at or above \$15,000. Data were missing for 6.7 percent of respondents.

Hunger: “In the last 12 months, were you ever hungry but didn’t eat because you couldn’t afford enough food?”

Poverty: If the respondent’s poverty status cannot be computed based on household size and income category, she was asked the following question: “Is your annual household income above [poverty threshold for this size household].” Data were missing for seven percent of respondents.

Employment: “Are you currently: employed full time, employed part time, self-employed, out of work for more than one year, out of work for less than one year, homemaker, student, retired, or unable to work?”

Educational attainment: “What is the highest grade or year of school you completed?”

Pregnancy status: “To your knowledge, are you now pregnant?” This question was asked only of women ages 18-49.

Children in the household: “How many children under age 18 live in this household?” “How old is the child/are the children?” The survey does not determine the relationship between the respondent and the children, other than being coresidents of the household.

Routine doctor visit: “Some people visit a doctor for a routine checkup, even though they are feeling well and have not been sick. About how long has it been since you last visited a doctor for a routine medical checkup?” We categorized women into those who had visited a doctor for a checkup within the past year, and those who had not had a checkup within the past year.

Health insurance: “Do you have any kind of health care coverage? (This would include health insurance, prepaid plans such as HMOs—health maintenance organizations—or government plans such as Medicare or Medi-Cal.)”

General health status: “Would you say that in general your health is: excellent, very good, good, fair, or poor?” We categorized respondents into two groups, those with excellent, very good, or good health, and those whose health was fair or poor.

Days of poor mental health: “Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” We categorized respondents into two groups, those with zero days of poor mental health, and those with one or more days of poor mental health.

Days of poor physical health: “Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?” We categorized respondents into two groups, those with zero days of poor physical health, and those with one or more days of poor physical health.

Smokes cigarettes: We considered respondents to be smokers if they reported smoking at least 100 cigarettes ever, and they reported currently smoking every day or some days.

Binge drinking: “Considering all types of alcoholic beverages, how many times during the past month did you have five or more drinks on an occasion?” We categorized women into two groups: those who reported that they had consumed five or more drinks on at least one occasion in the past month, and those who had not consumed five or more drinks on an occasion.

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